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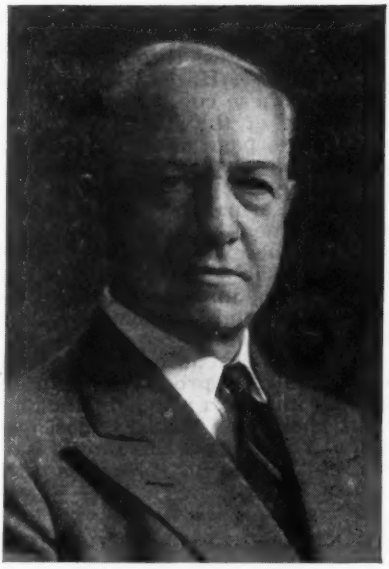

Dr. Maurice C. Tanquary

The Passing of Dr. Maurice C. Tanquary

How He Produced a Carload of Honey from 250 Packages of Bees in One Year

By E. R. Root

"How are the mighty fallen." While this remark would apply especially to some of the great leaders that helped us to win this war, in bee culture it would fit the subject of our sketch, Dr. Maurice C. Tanquary, who possibly had more bees under his charge at the time of his death on October 25, than any other living man in the world. His beginning in bee culture in 1924 was as remarkable as it was spectacular. He bought 250 packages of bees, put them on frames of foundation, and with them the very first season actually produced a carload of honey. He did this in North Dakota when the season was extra good, but in spite of all that, it took real genius for a beginner beekeeper to put his science into actual practical results—results that are almost unbelievable. For full data regarding this achievement see George S. Demuth's article in Gleanings in Bee Culture for March, 1925, entitled, "Carload of Honey from Package Bees."

Dr. Tanquary's advancement as a scientist was not only rapid but bordering on the spectacular. He was an Assistant in Zoology and Entomology and took graduate work at the University of Illinois from 1907 to 1912. Here he received his M.A. in 1908 and his Ph.D. in 1912. He attended Harvard in 1910 for graduate work. In 1912 and 1913 he was instructor in Entomology and Zoology at Kansas State College, Manhattan, Kansas. While there he was given a leave of absence for work as an explorer. He spent three years in the Arctics, a member of the Crocker Land Expedition, headed by Donald B. MacMillan. In 1918 and 1920 he was Associate Professor of Entomology, Kansas State College. In 1920 to 1924, he rose to the position of Chief of the Division of the Experiment Station of the State Entomologists of Texas, College Station, Texas. In 1928, he was invited to take the position of Professor of Apiculture, University of Minnesota,

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Dr. Tanquary as an explorer in the Arctic

made vacant at that time by the resignation of Father Jaeger. While there he did some extensive research work. He became convinced that some work should be done on the food value of honey. He met with much discouragement. He finally approached Mr. W. F. Straub, an extensive honey packer of Chicago, who became very much interested. At Dr. Tanquary's suggestion he not only sponsored but financed a movement to do some infant honey food research work. To that end they employed Dr. F. W. Schlutz, head of Pediatrics at University of Minnesota Medical School, who began work. Dr. Schlutz finally went to the University of Chicago where he continued work on honey. In the meantime, Mr. Straub sent printed matter on honey to over 20,000 doctors and important hospitals.

It is no secret that he and Dr. Tanquary were carrying on beekeeping on a gigantic scale never before known in this country—both in the North and in the South. We wrote Mr. Straub asking him if he would be willing to release information as to how extensive was their business. He replied as follows:

"We have lost not only a most able scientific associate in the operation of some 15,000 colonies of bees, but likewise a very good friend. Dr. Tanquary, in addition to his university duties served as President of Tanquary Honey Farms, Inc., in which we are interested and on which we have worked together for a number of years."

Dr. Tanquary was on a nine month basis with the University, teaching general bee culture and carrying on research work. During the three summer months he was free for personal supervision of his own colonies and those of W. F. Straub & Co.

In late years, Dr Tanquary sponsored the development of artificial pollen substitutes through his assistant, Dr. M. H. Haydak, as explained in these columns and in the last edition of the ABC & XYZ of Bee Culture, page 511. Even in his last days he was hopeful of results.

When we saw him last at Minnesota State Farms, he seemed to be a picture of health but it is possible that all of these various lines of work on so colossal a scale hastened his death. The immediate cause of death was uremic poisoning following an operation.

He was modest to a fault, lovable and likeable, a prodigious worker. We shall miss him as one of the most useful men the industry has ever known. That such a life should have been cut off in its prime is little short of tragedy.

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THE NEW SULPHA DRUGS FOR THE CURE OF AFB

The following letter has come from Charles A. Reese, State Bee Inspector for Ohio. He writes:

I was very much interested in one of your editorials page 493, November issue, relative to the use of sulpha drugs for the cure of AFB. When these drugs first made their appearance in the miraculous results of their use relative to human diseases, I immediately began to make some investigations, having in mind the possibility it might be one of the things I have been looking for. I have a very good friend who is a very eminent and outstanding and successful surgeon. Incidentally, he owns and operates one of the largest clinics in the Ohio valley and his hobby is beekeeping.

Not so long ago we were discussing the uses of the sulpha drugs together with penicillin and their possibilities in attacking AFB. He informed me their experience and research has definitely proven that they are only successful in attacking certain types of bacteria. They are particularly effective on the cocci type. The organisms of AFB and EFB are, as you know, the bacillus type; that is, the rod shape, while the other are the round or globular type. At no time have they shown effect upon the bacillus type. This immediately would lead one to the conclusion that they probably would have little or no effect upon our brood diseases. I will be interested in noting what Dr. Haseman has to say in his forthcoming publication, but judging from experiences shown by those who are conducting research with the various pathogenic organisms, the possibilities at present are not very promising.

Why I Keep Bees

By Clarence M. Carroll

I keep bees because I know of no other useful creatures that provide so much enjoyment and interest, both for myself and others, with so little attention and work. It's a hobby, but one that is decidedly not "in the red," in other words, it's profitable, too.

Consider any other livestock. Poultry, pigs, cattle, horses, goats, rabbits, all have to be fed or must have feed and pasture provided 365 days every year—no, not 364, but 365. They must have bedding and shelter. The bedding and the offal (the latter of course is useful, but disagreeable) must be removed at regular intervals. You can't skip it. Even sheep have to be dipped and clipped. Fencing and housing for animals runs into a large investment per head, and requires constant expenditures of labor and material for upkeep, and in addition, a lot of space and land.

Bees require comparatively inexpensive equipment that has little depreciation, and can be easily kept in tip-top shape. I have some hives still in excellent condition after 24 years. The bees' living quarters do not involve messy work to keep them clean and sanitary—bees don't live that way. Bees do not smell to high heaven as many animals do, neither do they wake me or my neighbors at unearthly nocturnal hours with snorts, neighs, moos, quacks, grunts, or cackling and crowing. Even a large apiary takes up only the space equivalent to a city lot.

Considering the investment in bees, hives, extractor, filter, heater, clothing, and tools, and the very few hours per colony necessary to produce a honey crop and supervise the whole business, nothing I know about compares with beekeeping. It is clean, fascinating, and of interest not only to the bee man, but to nearly all to whom it is mentioned. The surprising interest and real desire to know something of bees among average people is a constant source of wonder to me. "Oh, do you keep bees?" "Don't they sting?" "How do they make honey?" and many other questions.

Sure, they sting. This notion some people have that bees know their keeper is all wishful thinking. My bees come at me under some conditions like tracer bullets, and I have to be well armored. But, even with the armor on, I can still walk into the living room. You can't come in from the stable like that—not if you expect to stay married!

Can you take a 3-week vacation in summer or autumn if you keep cows? Can you spend Christmas with Aunt Martha in Punkin Hook if you have 1000 hens? Well, hardly, unless you have good and accommodating neighbors. Can you, Mr. Milk and Egg Man, move your critters to greener pastures easily? I can move mine, all at one time, in an hour.

I find it is profitable, in spite of giving away most of the honey. If I didn't give any away, and sold it all, I find from fairly accurate records that cover a period in which the retail price of honey went down to 12 cents and up to 35 cents per pound, that I would have netted $1.60 per hour, so it costs real money to be so generous. On a large scale the returns may be less per colony, but I still wouldn't have to get up in the dark on cold winter mornings to mix bran mash or throw down hay, squeeze milk from a reluctant bossy, or clean an odorous hencoop.

Now, of course, we know that there would be no America without cows, pigs, hens, their products and by-products. But for a small farm or city or suburban dweller, bees are a fine proposition. And is that honey good on hot waffles!

New York City.

HONEY FOR BEE STINGS

By B. M. Flood

The next time you get stung just rub honey on the spot and see where the pain and swelling goes. It is nature's own remedy which I have used for many years. My little daughter got a bee in her mouth while running through the yard not so long ago and it stung her on the end of the tongue. I pulled the stinger out and put honey on and in five minutes she never knew she had been stung. She also got one the other day in the corner of her eye. I used honey and that settled the case again.

Fort Lauderdale, Florida.

Movement of Bees in Edge of Cluster

By Dr. V. G. Milum

(Continued from November issue)

In the article last month, "Winter Cluster Temperatures," an attempt was made to point out that **57° F. is not the temperature of the winter cluster of bees or the temperature of the edge of the cluster below which it is not allowed to drop because of the activity of the inner bees and the insulating rim on the edge of the cluster.** Still further, it was asserted that **46° F. is not the temperature of the edge of the cluster.** I also stated that many erred in stating that there is a constant exchange of bees from the inside to the outside of the cluster and promised to discuss this question in spite of an expected crossfire of counter opinions.

While at the University of Wisconsin, this writer studied the temperatures of winter clusters of bees by means of electrical thermometers and took occasion to review the literature upon the subject of "Temperature Relations of Honey Bees in Winter."* This article traced the experimental work on this subject up to 1927. The development of some of the erroneous ideas is shown in the writings of various authors. Many of the assertions seem to be misinterpretations of the statements of others followed by attempts to develop theories and formulas which cannot be correct because of errors in the original principles involved.

Possibly some blame can be placed upon one author who, in his conclusions said, "So long as they are able to keep up their own body temperature they remain outside, but **when chilled** they pass into the interior. **In cold weather the interchange may be expected to be greater."**

Attention is called to the fact that the coldest outside temperature recorded by the investigator referred to was 14° F. and the only protracted cold period was nine days when the outside air ranged around 32° F. Some doubt can be placed upon the statement that the bees in the edge of the cluster were actually chilled when the observed interchange was taking place. Furthermore, the assumption is hardly justified. It is therefore unfortunate that these conclusions were printed in a publication that received rather wide distribution. Others copied the error or after making observations at fairly high temperatures, then in their own writings failed to distinguish or set forth the conditions of the observations about which they were writing. This criticism can be placed upon some very recent articles on this subject.

I now quote two paragraphs from my 1928 article to which I have previously referred:

"While the temperature of 57° F. is accepted as the point at which a colony of bees forms a cluster when the coldest point among the bees reaches that temperature, it is not the temperature at which the periphery or outside shell of the cluster is maintained. On the other hand, the temperature among the bees of the outside of the cluster when tightly formed varies directly with the temperature to which the bees are exposed. With decreasingly low temperatures, the bees in the periphery of the cluster eventually become cold and stiff and then perish, as in the case of individual bees, if they remain in such a condition over too long a period. With such conditions existing in the outer shell of the cluster, it is impossible for the bees of the interior of the cluster and those of the shell to exchange places. While there is some interchange of bees when exposed to higher temperatures, no normal bees can be expected to emerge from the warm interior of the cluster to take a place among the chilled bees on the edge of the cluster."

In 1944, I might add these additional words to the second sentence, "and also upon the ability of the bees in the warm center of the cluster to obtain honey." Perhaps also the word "normal" should be clarified as meaning bees not disturbed by jarring, light, or distress from need of a flight.

I quote again:

"With the formation of the cluster the bees tend to contract the cluster at colder temperatures, within certain limitations Since the bees are separated into bands by the midwalls of the combs, further contraction is limited after the cluster has once formed, to movements lengthwise and vertically of the combs, since the individual bees cannot and will not leave the cluster to pass around, over, or beneath the combs. At the colder temperatures, many bees are left stranded on the ends of combs because they cannot contract along the surface of the combs toward the center of that comb after they are once chilled. (This is essentially the idea expressed by Quinby in 1864, yet disregarded by most modern writers and lecturers on wintering of bees.)"

A Recent Experiment

Because the bee magazines have constantly recurring statements in

*28th Annual Report of the Illinois State Beekeepers' Association, 28:98-130.

contradiction of some of these 1928 conclusions, a full colony of bees was wintered in 1943-1944 in a hive provided with a glass cover and bottom board. It was set up at a north window in a room maintained at ordinary room temperatures. When tightly clustered the colony covered five frames in width with the top of the cluster against the glass cover, with the actual contact with the glass being decreased somewhat as increased ventilation was given the colony, which was made possible by sliding one half of the glass top backward with or without increasing the size of the entrance. Increasing the amount of upward ventilation decreased the temperature of the air surrounding the bees and tended to make more compact cluster formation within certain limitations.

After numerous and constant observations I found as I have always contended that after a cluster is definitely and compactly formed, there was no movement or migration whatsoever of bees from the outside to the inside of the cluster without a definite warming of the surrounding temperature following a cold spell or while the cluster is being compactly formed. Neither is there any movement from the inside to the outside of the cluster on the edges of the cluster except an occasional bee that seemed to be distressed and in need of a flight. This assumption is made because such a bee would crawl completely away from the cluster toward the lighted window and if it did not become chilled it might return within the cluster. The main cluster of bees seemed not to be affected by the light. As previously stated, the top of this cluster was against the glass with a room temperature on the top side and the cluster heat warming the bottom side. Within the area touching the glass cover except the outer rim, there was movement of bees and some interchange of positions but not through the outer rim of the portion touching the glass. If interchange could take place when the bees were surrounded by chilling temperatures certainly one would expect it at the top of the cluster where within there existed a warm temperature permitting freedom of activity.

Now let us consider what really happens when a cluster is definitely and compactly formed. If colder temperatures follow there may be increased activity within the cluster, but the bees in the periphery, or the rim of the cluster, except those against the glass inner cover or top of the hive, make only slight movements as the outside temperature goes down. When they are exposed longer to a given chilling temperature those on the extreme outside of the rim become motionless and eventually are chilled and then killed if kept too long in this condition. Many of these chilled and dead bees will be found to have a well filled honey stomach, indicating that they do not die from starvation. Possibly also this is a clue to the claim of some that a colony does not use as much honey during colder weather and this in turn is an argument against packing of bees. Apparently those colder chilled bees on the edges of the cluster cannot use the honey in their chilled condition and those within may not be able to reach consumable supplies, particularly when there is no honey directly above the cluster.

While certain writers have given experimental evidence to show that a colony does not use as much honey during a cold spell of short duration, my own observations make me positive that when brood rearing is not in progress, colonies with the least protection in areas with temperatures similar to the northern half of Illinois and southern Wisconsin, will use more stores than colonies provided with some form of protection or winter "overcoat."

What happens to those chilled bees on the edge of the cluster? As the temperature outside the hive increases or the ventilation is decreased, which is a means of raising the temperatures to which the bees are exposed, the temperature outside the cluster and around the bees in the hive starts to warm up. Some of these chilled bees, if not already dead, eventually exhibit movements of their legs and other appendages. As the temperature increases further, the movements become more active, but this wriggling may mean the doom of the individual workers. Before they regain complete body control, they may wriggle away and drop from the cluster. One may observe this among the exposed bees at the top edge of the cluster and if he listens intently, he may hear others strike the bottom board as

they drop from the bottom of the cluster. These bees thus place themselves at a colder point in the hive. Whether they ever completely recover, of course, depends upon the succeeding sequence of temperature changes. If a general warm spell follows and the whole hive is warmed above 42° F., these temporarily chilled bees may recover and return to the cluster or they may eventually die from exposure if the warming is too long delayed. Death also may result for the exposed bees on the edge of the cluster if they remain chilled over too long a period.

When the outside temperature as well as the temperature around the bees rises sufficiently for a general expansion of the cluster after the cluster has been exposed to cool temperatures for a time sufficient for some of the outer rim of bees to become chilled and motionless, then some bees from inside the periphery push through the rim of the cluster sphere. These inner and thus warmer and more active bees may come out to outlying points, load themselves with honey from the combs and return to somewhere within the cluster. This should not be labelled as an interchange of positions with bees in the rim of the cluster. Later on when the whole hive is sufficiently warmed, there may be a general expansion but the amount is dependent upon the length of and the amount of warming. If the period is short the original bees of the periphery will remain in their approximate positions. As previously stated slightly more warming may cause some to drop away from the cluster. With additional warmth, there may be a general expansion of the cluster. If it turns colder again, the majority of the bees seeking honey in the outlying areas will move back within the cluster. Some will reach only the edge of the cluster while some may become stranded, chilled, and eventually die outside the cluster.

To summarize the general thought of the last few paragraphs is to make the assertion that the oft-expressed idea of the interchange of bees from the outside edge to the inside of the cluster is one that should be tempered with an additional qualifying phrase stating at what outside temperatures the colony is exposed but better still, what is the temperature surrounding the cluster. This latter condition very closely controls the temperature of the bees in the outer rim because they are cold blooded animals and there is not too much heat transmission from within to those outer chilling bees except near the top of the cluster. Since we know that motionless bees are chilled at a point near 42° F., we suspect that at cluster surrounding temperatures (not outside-of-hive temperatures) even a little higher, there will be no interchange of bees from inside to outside the cluster. We know that it did not happen at an outdoor (outside-the-entrance) temperature of 30° F. and 15° F., when the hive was provided with upward ventilation which certainly tends to give a temperature surrounding the cluster somewhat similar to the outside temperature. And we have not yet found a lower temperature "at which the interchange is greater" or any interchange at all. It may happen on certain occasions but we have not yet been fortunate enough to observe it. We say it is not the general rule.

A number of years ago, one English writer, said, "You can't insulate a house with the front door open." Shall we now say, "You can't insulate a hive with the front door open and a hole in the ceiling"? Enthusiasts for top ventilation perhaps should keep this in mind. While top ventilation does get rid of damaging moisture and prevents clogged entrances, there may be a better way. Condensation occurs on cold surfaces. (See your ice-water pitcher.) Possibly top insulation sufficient to prevent condensation of moisture and heat loss (a saving in bee activity and consumption of stores) and a larger entrance for more ventilation with some provision to prevent snow clogging, will do the job better. Now perhaps we are guessing or maybe only assuming as we have accused others of doing.

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1945 GLEANINGS INDEX

Because of the shortage of paper we are not printing the yearly index with this number. However, the index is being printed in leaflet form and any one desiring it can secure it by sending us a post card asking for it.

Wintering

By E. R. Root

(Continued from the November issue)

[In the preceding issues of this journal we have endeavored to set forth some general principles on wintering, winding up with the new doctrine of pollen reserves and plenty of honey in colonies strong enough to occupy two and sometimes three Langstroth hive bodies, as recommended by Dr. Farrar, with an upper and lower entrance. The question of packing, how much or how little, or none at all, we left to what the locality and experience seemed to indicate.

We advised when in doubt to play safe and pack until such time as one could learn he could save money by not packing.

We now begin with the importance of letting bees form their own winter nest between the two stories of the hive.—Ed.]

Importance of Letting Bees Form a Winter Nest

What is meant by a "winter nest"? A space of empty brood cells in one or more combs, such space approximating the form of a flattened sphere in an ordinary Langstroth brood nest. These empty cells surrounded by sealed stores constitute the winter nest where bees cluster when conditions are ideal. As the stores are consumed, the number of empty cells increases. As a general thing, the cluster of bees will be located near the front of the hive and regularly over the entrance or near the top entrance in the hand hold. As the stores are consumed the bees move upward and backward.

Very often a well-meaning A B C scholar finds five or six combs in the center of the hive, having a space of empty cells as large as the hand spread out. He thinks this is all wrong and will remove the combs containing such spaces, and put in their place solid combs of honey. What has he done? He has compelled the bees to cluster upon sealed honey. The cluster is broken up into slabs approximately ½ inch thick, each slab of bees separated by approximately an inch of solid honey. Instead of having one solid cluster separated by only the midrib of the combs, he has made a series of clusters, each within itself trying to maintain its own body heat but at very great disadvantage. This is a serious mistake that is often made.

It is recommended that there be an upper and lower entrance and that the packing material be tacked closely around the hole forming the upper entrance. It is not necessary to put in a tube. In some localities where freezing weather, ten below 32° F. or ten above 32°, prevails during the greater part of the winter, it may be safe to use no packing. A strong, vigorous colony of bees, a large part of which are young bees, in a two-story hive, should cluster between the upper and lower set of frames, and with good natural stores of honey and pollen, with windbreaks of forest trees, low shrubbery on all four sides of the apiary, may not need any packing at all. Some large honey producers with from three hundred to two or three thousand colonies, admit that while packing may be of benefit, the cost of applying the same does not offset the theoretical benefits secured.

How to Pack a Colony for Winter

As already stated, a large number of successful beekeepers are beginning to discover they do not need any packing. Some few use a moderate amount, and some use only a single wrapping of water-proof felt paper. For those who desire to pack, we are giving the different methods that have been in use, some of which we have used in our own yards in an experimental way, alongside of other colonies in the same yard, of the same strength, not packed.

What Packing Material is Best

Dry forest leaves or cut straw, usually available everywhere in the fall, make the best packing between the walls of a winter hive. If either acquires moisture it quickly dries out. Ordinary planer shavings will hold moisture and then freeze around the bees. Such packing, instead of insulating the bees from cold, puts them in cold storage and this does harm. Leaves or straw, if not packed tightly, will release the moisture and provide protection.

In house-building it was formerly recommended to put mineral wool between the walls and over the ceilings. Later practice provides means by which mineral wool or other packing material shall dry out. Unless this is done mineral wool or other packing should not be used. Better by far use air space between the walls.

(Continued on page 567)

Five Colonies to Three Thousand in Twenty-five Years

By H. H. Root

THE HOUSE THE BEES BUILT. Irvin Stoller's modern 7-room home fitted with all conveniences.

Some of the largest honey producers in the country have achieved greatness by continuing a commercial business established by a father or other relative. Others start at the bottom and climb up. Irvin Stoller, of Latty, Ohio, belongs to the latter group, and in going up the ladder of success, he went from round to round—a steady climb.

Mr. Stoller started working with bees in 1920. His father had a few colonies. The boy always loved them and he started on his own with five colonies. By the time he was married in 1925 he had 172 colonies and such was his unbounded enthusiasm and energy that he made $1000 clear profit the first year of his married life. This he invested as a first payment on a home. He has always been his own time-keeper and he times himself for efficiency, constantly seeking and finding better methods.

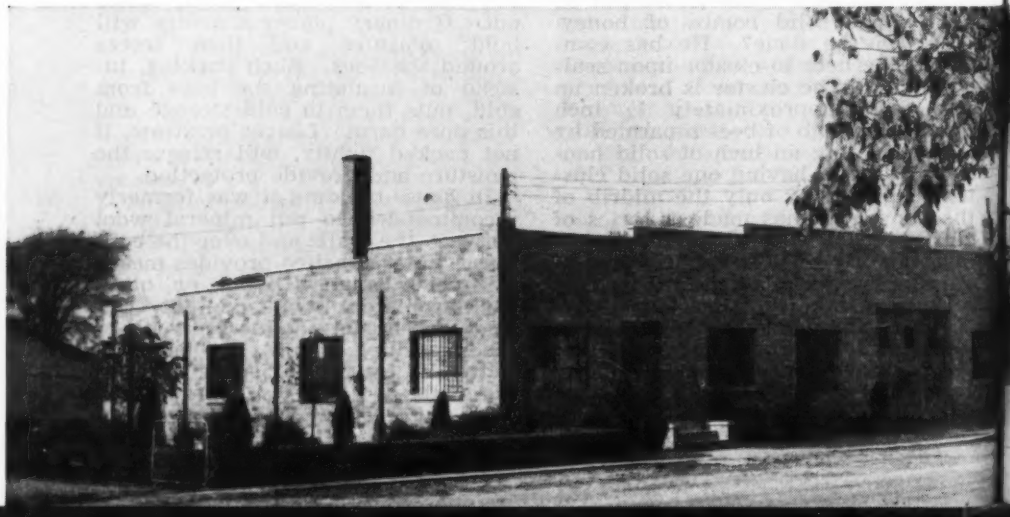
Starting off by producing section comb honey he went into cut comb honey about 1932, as well as extracted honey, discontinuing cut comb about 1936 and confining his attention then wholly to the production of extracted honey.

Mr. Stoller, with a good eighth grade education and unbounded enthusiasm, and by reason of hard work and long hours, increased from 5 colonies to nearly 3000 in 25 years. Today he has about 1000 colonies in Ohio, 950 in Indiana, and 1025 in Georgia.

His activities in Georgia have been very successful. He specializes in five-frame nuclei. The racks on the truck permit the hauling of 482 of these five-frame nuclei at a load. Rarely is there any loss.

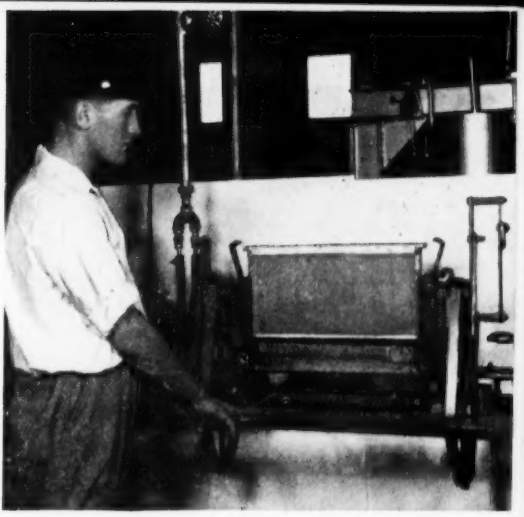
The apiaries in Georgia have been run not so much for honey as for bees. It is true that the Georgia bees usually find enough food but sometimes they must be fed. They are relied on to keep the production in the North at high peak. Sometimes there are enough to permit

As beautiful and substantial a honey extracting building as can be found in the United States, owned by Irvin Stoller, Latty, Ohio.



selling bees — packages only — no queens. High peak honey production in Ohio and Indiana means an average of 50 tons in each state. This, in a good year, figures out a little more than 100 pounds per colony average.

As children, we all read about the "house that Jack built". The beautiful brick residence with seven rooms and all modern conveniences, is literally the "house that the bees built".



Wayne Stoller standing by the uncapping machine. Front knife only showing. Comb shown uncapped on the machine has been run thrrough the extractor and placed in the machine only to show the relative position.

New Up-to-date Honey House

Insurance never compensates for a fire! True enough, but on the other hand, a fire enables one to start from the ground up and build anew, taking advantage of all that has been learned in years gone by.

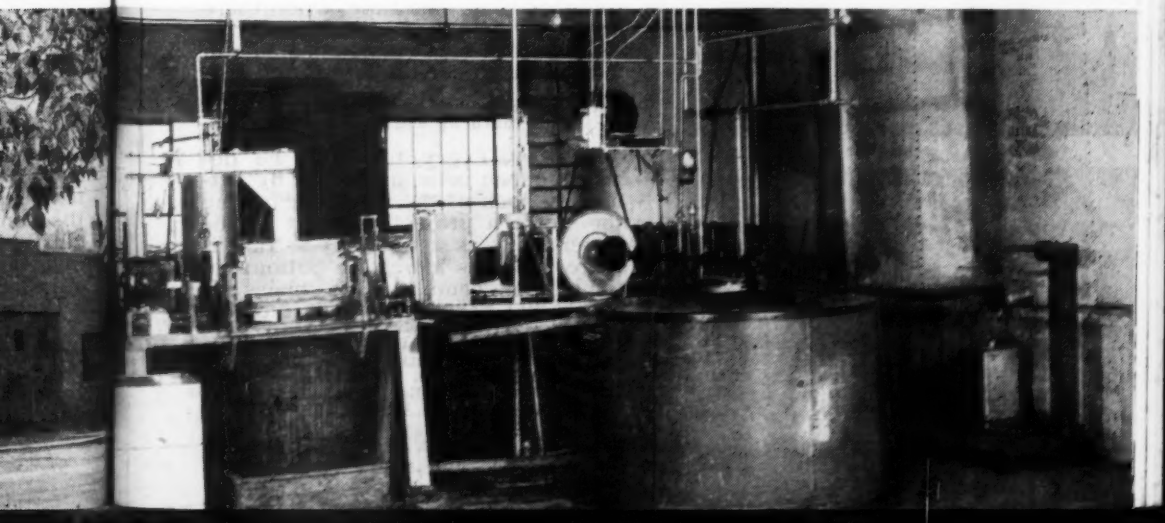
The Stoller honey house burned down in January, 1938. Thirty-three hundred supers were also burned, two large extractors, tanks, and other equipment, totalling an $18,000 loss.

The Stoller honey house of today is of brick, practically fire-proof construction, 60 x 80 feet. The steam boiler has a stoker feed. In the equipment are two 155-gallon tanks, two 50-frame extractors, the Stoller double-knife uncapping machine, Stoller capping press, besides many tools and items of small equipment. A prettier building, with its shrubbery so artistically arranged, can hardly be imagined. The rolling stock consists of two trucks, two extractors, and two trailers.

Stoller Double-knife Uncapping Machine

Never satisfied with existing arrangements for uncapping combs, Mr. Stoller began work on a machine of his own, and as early as 1939, was using a doube-knife machine, uncapping both sides of a comb at one stroke. In years past, I have never been very enthusiastic about double-knife machines, for I was unable to see how irregular combs could be so uncapped, that is, combs bulged on one side and depressed on the other. However, this was before I had seen Mr. Stoller's machine with its instantly adjustable knives which can cut down to the mid-rib, if necessary, and which automatically sepa-

Interior of the Stoller extracting room showing the fire-proof construction, two honey tanks, one of the two 50-frame extractors, comb holder, Stoller uncapping machine underneath which is one of the containers in which cappings are dried of honey by hydraulic pressure.



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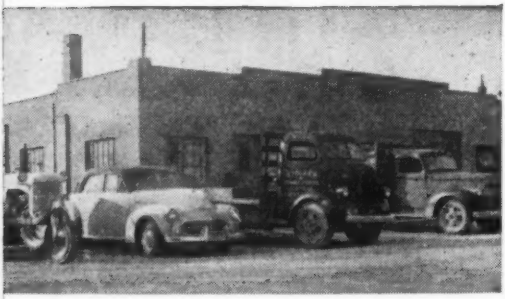
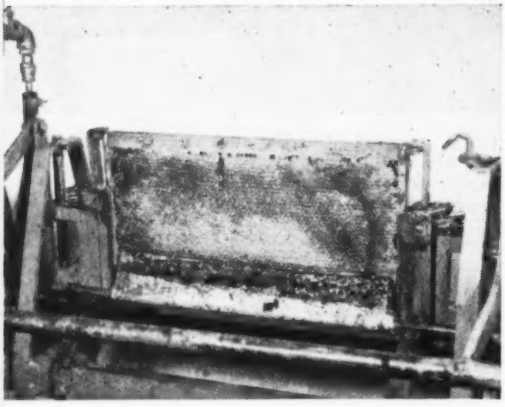


The Stoller rolling stock consists of two trucks, two tractors, two trailers, besides a nearly new passenger car.

rate to clear the top bar, enabling both sides of the comb to be uncapped thoroughly, at one stroke. To avoid jerking of the combs, Mr. Stoller, in the very beginning, saw the advantage in having the knives operate in opposite directions. In other words, while one knife moves to the left, the other one moves to the right. The gear box encloses the actuating mechanism in oil, and the machine is unbelievably quiet and quick. Think of uncapping 300 combs an hour!



Stoller uncapping machine, the comb shown halfway down. Both sides are uncapped at once and the knives automatically spread when the top bar is reached. Capacity 300 combs per hour.

Notched Rabbets

Not claiming originality on the idea of spacing combs by means of notches, Mr. Stoller, nevertheless does claim originality for his particular type of notched rabbets. These he has been using for some time and claims for them a saving of labor in handling, and in hauling. He believes that moths work less if the combs are spaced 8 to a 10-frame super. Then, too, the cost is less because only 80% as many frames and sheets of foundation are needed. There is more honey per super as well as more wax. A recent slip-on spacer is his latest invention.

One of Stoller bee yards with the owner hard at work.

Swarm Prevention

Mr. Stoller does not practice the Demaree plan. In June, when there are signs of swarming, he sets the second story back ⅜ of an inch and puts an excluder on top of the second story. Every ten days he destroys queen cells, or checks by lifting the back of the top super (using the ⅜ as a projecting front of the lower story as a support) to find if there are cells along the bottoms of the upper combs. One man can check 200 per day by this method.

Irwin Stoller and family, standing before their beautiful home. Left to right: Darle, 14, Gale, 12, Mrs. Marie Stoller, Christine, 16, Irwin Stoller, Wayne, 18.

By following this plan, simple though it is, his loss from swarming is not over 2½ per cent.

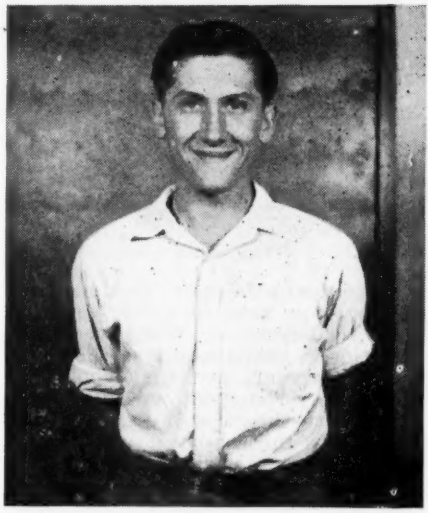
Preparing for Winter

Neither in Indiana nor in Ohio is any heavy packing material used. Each two-story hive is wrapped in slater's felt and in each case there is a top entrance. The Ohio apiaries are, for the most part, in locations where there is neither aster nor goldenrod. The clover honey is all extracted above the double brood nest and each colony that needs feed is fed sugar syrup. The tank is provided with an agitator for quick dissolving of the sugar and the making of the syrup is facilitated by the use of steam at the honey house. The feeders are large pans made to fit in empty supers. Drowning is prevented by a few handfuls of excelsior.

In Indiana, where there is plenty of aster honey and where the weather is usually such that the honey is ripened, the bees are allowed to winter on the fall honey. In Indiana, moreover, entrance closing blocks are not used but screens are put in place instead, with wires about ¼ inch apart.

Both in Indiana and Ohio, the winter loss does not average over 5%—a good record, certainly, taking severe winters and mild, good years and bad.

What a comfort, what a privilege, to have built wisely and well, and to have a wonderful family consisting of a fine daughter and three stalwart sons, the oldest, since graduation day, spending his whole time in the business.



Wayne Stoller, since his graduation from high school, has been his father's right hand man.

Congratulations to Mr. and Mrs. Stoller, and may no rounds be missing in their ladder leading toward even greater triumph!

A Saskatchewan Beekeeper Writes of Queens and Packages

By J. A. Taylor

In your talks to beekeepers in the May Gleanings you have an article on what to do with weak colonies. Your friend from Pennsylvania has the same system as I have and I must say it works 100%. I have no weak colonies this spring but I had ten nuclei which I wintered on five frames each for the purpose of having a few extra queens to use for queenless colonies early in the spring. When I found I didn't need any queens for this purpose I put these over some of my strongest colonies using an excluder and one sheet of newspaper. In a day or two the paper is out and the bees occupy the whole and the weak colony builds up very quickly. I have never lost a queen through the bees killing her.

I'm only a side liner with about 70 to 80 colonies, but I certainly enjoy my bees. My 50 colonies wintered 100% in a bee cellar, also the nuclei I mentioned. I purchased 25 packages on April 21. My nuclei are far better than the packages. They (the packages) all got away to a good start and I lost no queens through introducing but the packages I got have far too many old bees in them and quite a lot of drones. The queens are not uniform.

Last year I bought a few packages which had Nosema from the start. All the queens were superseded in about three weeks and few of them paid expenses. I used to get good packages but I'm disappointed in the shipments this last two or three years. The cost is high and with me the quality low. There is certainly a difference in quality from different shippers. I have tried to purchase from some I consider the best but they were sold out even when I ordered in January.

Manor, Sask., Canada.

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For the Yuletide Season

By Mrs. Benj. Nielsen

Cranberry filled honey coffee cake.—Photo courtesy of The Kellogg Company.

Once again the most glorious time of the whole year is rapidly drawing near. Anticipation, whispered consultations, preparations — it's such fun! This year, perhaps even more than in any year past, we will appreciate more the versatile qualities of honey. In these busy days of hectic rushing, when each waking hour is so full of activities that we wonder how we will ever find time to make the characteristic goodies that "make" Christmas, it's a joy to have at hand so able an ally as honey. Honey cakes, puddings, cookies, and candies can be made days to weeks ahead and because of the inimitable keeping qualities of honey made foods, these delicacies will be delightfully fresh and amazingly improved in flavor.

So when you can find a few spare moments stir up a batch of luscious Honey cakes, puddings, cookies, and fruity bars. Be sure to store them in tight containers, and, if your family is anything like the Nielsen one, it will be wise to hide these containers well—if you hope to have these goodies to serve at certain specified times. If you are a beginner in this honey cookery, you will just have to put to the test this make-them-way-ahead-of-time procedure to fully appreciate how indescribably good honey-made products can be when given a chance to "ripen", so to speak. Cookies and cakes, especially if you like them sweety-sweet, may not seem to be sweet enough right after baking—just give time a chance to mellow them and you will be pleasantly surprised.

The results of many of the following recipes will make grand gifts. If you would like to give a more substantial gift, you might choose one of the lovely Pyrex glass dishes, bake the coffee cake or pudding in it, gift wrap it and present it thus, or package your honey cookies in a decorative pottery cooky jar. These cookies are excellent packers and carry well, so do not hesitate to forward them to the boys in camp.

And now a Merry, Merry Christmas to each of you and may you experience pride and satisfaction in serving these honey treats throughout the entire yuletide season.

Cranberry Filled Honey Coffee Cake

Two cups cranberries and ⅔ cup honey. Cook berries and honey together over low heat, stirring carefully until skins are broken. Let cool.

Two cakes compressed yeast, ¼ cup lukewarm water, 1 cup whole bran, 1 cup scalded milk, ⅓ cup shortening, ⅓ cup honey, 1 teaspoon salt, 2 eggs, and 5 cups sifted flour.

Soften yeast in lukewarm water. Soak bran in milk; add shortening, honey, and salt and stir until shortening is melted; cool to lukewarm. Stir in enough flour to make a thick batter. Add yeast and beaten eggs, stir well. Add remainder of flour to make a soft dough. Turn onto lightly floured board and knead. Place in greased bowl, cover and let stand in warm place until double in bulk. When light, punch down; divide dough into two equal portions and roll each into rectangle; about 9x12 inches. Spread cranberries over half of each rectangle; fold other half over cranberries and press edges together. Place in greased oblong baking pans and let rise until double in bulk. Bake in moderate oven, 350 degrees F., 25 to 30 minutes. While still warm frost with confectioners' sugar icing and sprinkle with chopped nuts and cranberries. Yield: 2 coffee cakes 8x12 inches.

Christmas Honey Pudding

Two cups All-Bran, 1 cup dry bread crumbs, 1 cup milk, scalded, ½ cup honey, 4 eggs, separated, 1½ cups seeded raisins, chopped, 2 cups seedless raisins, chopped, ⅓ cup citron, chopped, ¼ cup flour, 8 ounces

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suet, chopped, ¼ cup grape juice, 2 teaspoons nutmeg, ¾ teaspoon cinnamon, ½ teaspoon cloves, ½ teaspoon mace, and 1½ teaspoons salt.

Soak All-Bran and crumbs in milk, cool. Add honey, beaten egg yolks and fruits mixed with flour. Cream suet. Add suet, grape juice, spices, and salt to fruit mixture. Fold in stiffly beaten egg whites. Fill greased pudding molds two-thirds full, cover and steam 5 hours, or in individual molds 2 hours. Yield: 3 1-pound puddings, or 14 individual puddings. Figs or dates may be substituted for part of raisins, if desired.

Honey Fruit Sauce

Three-fourths cup honey, 2 tablespoons cornstarch, 1½ cups fruit juice, 3 tablespoons lemon juice, 1 tablespoon grated lemon rind, 1 teaspoon nutmeg, and ½ teaspoon salt.

Combine honey and cornstarch in saucepan or in top of double boiler; gradually stir in fruit juice. Cook over low heat or over boiling water until thick, stirring constantly. Remove from heat; add remaining ingredients. Serve hot or chilled.

Foamy Honey Fruit Sauce

One-half cup milk, ⅓ cup honey, 2 teaspoons cornstarch, ⅛ teaspoon salt, 1 tablespoon butter, 1 egg, separated, 1 cup brown sugar, firmly packed, ½ teaspoon vanilla, 1 tablespoon lemon juice, and ¼ teaspoon grated lemon rind.

Scald milk in double boiler. Blend honey with cornstarch and salt. Combine with milk. Cook about 10 minutes, stirring occasionally. Remove from heat; add butter. Blend egg yolk and brown sugar together, add vanilla, lemon juice, and rind; combine with milk and honey mixture; fold in stiffly beaten egg white. Serve cold. Makes 1½ cups.

Mince Meat Honey Drop Cookies

Two and ½ cups sifted flour, 4 teaspoons baking powder, ¾ teaspoon salt, ½ cup shortening, ½ cup honey, 2 eggs, 2 cups mince meat, and ½ cup whole bran.

Sift flour, baking powder, and salt together. Blend shortening and honey together thoroughly. Add eggs and beat well; stir in mince meat and bran. Add dry ingredients; mix well. Drop by teaspoonfuls onto greased baking sheets. Bake in moderately hot oven, 375 degrees F., 15 to 20 minutes. Yield: 4 dozen cookies, 2-inches in diameter.

Honey Oatmeal Chocolate Drops

One-half cup shortening, ½ cup brown sugar, ⅓ cup honey, 2 eggs, ⅔ cup chocolate chips, 1 cup oatmeal, 2 cups flour, 1 teaspoon soda, 1 teaspoon baking powder, ½ teaspoon salt, ¼ cup buttermilk or sour milk, 1 teaspoon vanilla, and ½ cup nutmeats.

Cream shortening and sugar. Add honey, eggs, and buttermilk. Beat a minute and lightly mix in remaining ingredients. Drop portions of soft dough from tip of spoon onto greased baking sheet. Flatten with spoon or knife. Bake 12 minutes in moderate oven, 350 degrees F.

Honey Fruit Cake Bars

One cup shortening, ½ cup honey, ½ cup sugar, 3 eggs, beaten, 2 cups sifted cake flour, ½ teaspoon soda, ½ teaspoon salt, ⅛ teaspoon cloves, ½ teaspoon nutmeg, ¼ teaspoon cinnamon, ½ cup fruit juice, 2 cups raisins chopped, and ½ cup chopped nutmeats.

Cream shortening, add honey and sugar and when well mixed add eggs. Mix and sift dry ingredients, reserving ¼ cup for coating fruit, and add alternately with fruit juice. Combine fruit and nutmeats and fold into the mixture. Spread VERY thin in a well greased baking pan. Bake in a moderate oven, 350 degrees F., for 35 minutes or until done. Cool slightly and cut in oblong bars before removing from pan. Roll in confectioner's sugar.

Honey Rocks

Four cups sifted flour, 1 teaspoon baking powder, ½ teaspoon soda, 1 teaspoon salt, 1 teaspoon cinnamon, 1 cup shortening, 1½ cups honey, 3

(Continued on page 565)

Christmas honey pudding.—Photo courtesy The Kellogg Co.

Melting a Small Amount of Beeswax

By M. J. Rowland

Beeswax is urgently needed for munitions and war equipment and at the current price it is a remunerative product of the apiary. Unfortunately, rendering a small quantity often proves difficult and messy.

Solar wax extractors do good work when and where the sun is strong enough, but in many places it will not melt wax during the late summer and autumn. Then the stove and straining bag must be brought into use.

We have used the method outlined below for a number of years now and find that, with care, only a very little wax is left in the slumgum and, if the equipment is kept ready for use from season to season, the time required is reduced to a minimum.

Equipment: Two pails or kettles, preferably aluminum or granite, one for melting, the other for settling.

About two yards of cheesecloth or similar material. Cheesecloth should be doubled and enough of it to line the settling pail and leave a good length of corners hanging outside to be gathered up and tied together with string while straining.

Two squeezers. A suitable squeezer can be made with two sticks roughly about one by two inches and two feet long fastened together with leather or doubled canvas tacked around and across one end of each stick to form a hinge. Two squeezers are necessary.

Melting: Into one of the pails, half filled with water, put enough cappings to fill it and then put it on a hot stove. The cappings may be pressed down a little but not too much. More may be added as the first lot melts.

Stir frequently to assure uniform melting, being careful not to spill any onto the stove. It may take three hours to melt the cappings thoroughly. The wax must be fully melted and not merely reduced to the earlier stage of a gummy mass. Wax, when melted, is a clear liquid. The wax should not be boiled. It is very inflammable and care should to be taken not to let any boil over.

Straining: Warm the container into which the wax is to be strained by pouring in a little hot water.

Place a broom handle or other strong stick on suitable supports. Put the wax bag or straining cloth in place in the settling pail leaving plenty hanging over the side. Pour the wax and water from the melting pail into it. Gather up the ends of the cloth, tie with strong string, and suspend from the broom handle leaving the bottom of the bag slightly above the top of the pail.

Put one of the squeezers on the bag just above the top of the mass and tie the ends tightly together. With the other squeezer commence squeezing the mass but not too hard at first. Change the position of the squeezer or take a new grip frequently. Also lower the upper squeezer as necessary. Considerable pressure should be applied when the slumgum is nearly dry.

Cooling: Immediately after straining, wrap the pail well with many layers of paper folded to the right width and tie securely. Cover well. Stand the pail on a good thickness of paper or cardboard or put into a carton. Leave undisturbed until the following morning. The wrapping is to keep the wax liquid until foreign matter has settled.

Removing the Cake: The cake of wax sometimes sticks to the edge of the container. It may be loosened with a warm knife but the knife will have to be reheated frequently by the fire or in hot water. Or instead of using a knife the pail may be held by a warm stove and turned slowly, or suspended for a few minutes in warm water.

The cake of wax should be hard and firm. If it is crumbly, there were too many cappings for the amount of water. It should be melted again in fresh water. If clean, it need not be strained this second time.

Caution: Again a word of warning against wax being spilt or allowed to boil over onto the stove.

Kapuskasing, Ontario, Canada.

(We recommend somewhat heavier squeezers—at least 1 x 3 inch oak and about 3 feet long.

Use rain water or other soft water if possible. If none is available, acidify the hard water by adding about 1 per cent of vinegar to neutralize the alkalies which will otherwise partly saponify the wax. —Ed.)

The Caucasian-Italian Hybrid

By H. S. Rogers

The increasing popularity of the Caucasian bee brings up the question as to what the cross with the Italian is like. Since I have been raising such hybrid bees for the past twelve years (trying to select out a strain that would combine the virtues of both races) I am in a position to answer such questions.

Many of the traits of the two races of bees can be seen as Mendelian unit-characters. Other traits are more complex, and constituent unit-characters are hard to identify.

The yellow color of the Italian seems dominant in the workers, which look much like pure Italians. The hybrid queen shows incomplete dominance of the yellow color. The drone, since he is produced from an unfertilized egg (parthenogenesis), is never hybrid, but apparently color is not simple, probably it is a product of two or more "determiners" since the proportion of yellow drones seems less than half.

It is in disposition that the results of the cross are most interesting. The Italian bee is plainly more excitable than the Caucasian and flies up more readily when the hive is opened. But although they may fly around freely and threaten, they do not dig into one's clothing much and do not sting readily. The Caucasian is more phlegmatic and stays down on the combs when the hive is opened. But if they do finally decide to fight, they do not threaten, they quickly dig in and sting!

In the hybrid the non-stinging tendency of the Italian seems dominant over the Caucasian tendency to dig in and sting. Also the phlegmatic disposition of the Caucasian seems to be dominant over the more excitable disposition of the Italian. The result is that the first generation hybrid combines the desirable qualities of the two races, staying down on the combs and not stinging. One such colony—a big one—could be handled without smoke, veil, or gloves, even in bad weather without getting stung! Such bees enable a beekeeper to speed up his work. Mostly the smoker goes out through disuse. Gloves are entirely superfluous, a real comfort in hot weather.

But in the second filial generation the recessives begin to segregate out! About one colony out of sixteen will show in pure form the excitability of the Italian combined with the Caucasian tendency to dig in and sting! Such bees are actually dangerous. In casually looking over the apiary one Sunday, not dressed for bee work, I happened to stroll close in front of such a hive. Instantly my ankle was plastered with stinging bees! They shot out of the hive like bullets and hit digging and stinging like furies. None were flying around in the air "threatening"; they were all digging and stinging! Was I astonished.

Such bees are very hard to requeen. Not only are the bees hard to handle, but the queen herself seems excitable and hides. When I go to requeen such a colony I am always reminded of a quotation from the Bible—"Put on the full armor of God that ye may withstand the fiery darts of the wicked!" Put on thick underwear, tuck heavy pants into high topped shoes, put on a sweat shirt and tuck it under your belt, and make sure that your bee veil does not touch your head anywhere, wear two pairs of gloves, one inside the other; these bees sting anything, even your shoes!

In one case I had the wife pin down my bee veil in back, but in stooping the pin tore a small hole. When I got back the wife picked 27 stingers out of the back of my head and neck!

The hybrid is as hardy as the Caucasian. The contrast between them is distinct. Here are two examples: Twelve packages of Italians and two of Caucasians were started the first of May in a location two miles from Lake Michigan. The Lake breeze was quite regular that month. The bees would start out with the warm morning sunshine and get caught by the lake breeze (about 55 degrees) that came in almost daily about noon. The Italians would freeze stiff and be unable to get back to the hive. Within two weeks there was not more than a teacupful of bees left in the Italian hives, but the hybrid and the two Caucasian colonies built up normally.

(Continued on page 566)

Southern States Beekeeping Federation

By H. H. Root

This great conference representing, as it does, fifteen states in all, was well attended with an average number at all sessions of about 100. Producers from Iowa, Ohio, Pennsylvania, and other northern states were present. Several of the speakers at the last minute were unable to come and I, myself, had to leave before noon of the second day, so was unable to hear all of the very good program.

P. G. Craddock

President P. G. Craddock called the meeting to order on the morning of October 25, announcing that this was the second war-time meeting of the Southern States Federation. He then reviewed the history of the Southern Congress and made an appeal for the maintenance of the organization that can best meet post-war problems arising between the honey producers of the North and the package bee shippers of the South.

James I. Hambleton

Speaking on the subject, "Post-War Plans for the Industry," James I. Hambleton, of the U. S. Bee Culture Laboratory, Beltsville, Maryland, in his opening remarks mentioned that honey is a natural product, that it does not necessarily need changing. In reference to filtering, he fears it is a mistake to imitate the sparkling clearness of cheap syrups.

One of the earliest and gravest of all the problems facing the industry in the post-war period is the poisoning of bees. If the fruit growers' best friends are killed by careless use of poison, those who apply the poison are quite likely to do more damage than good, and thus be worse off in the end.

The new poison known as DDT is perhaps the entomologists' dream. Two million pounds a month are already being sent to the armed forces. It may be used on alfalfa to kill the alfalfa insect enemies.

Regarding disease-resistant bees, we shall hear more later. The improvement is likely to be gradual. Not as much progress is being made at present, for it is hard to secure good matings. It is difficult to get more than 60% pure matings. The artificial insemination of queens may help. Already several generations of artificially inseminated queens have been raised but they have not yet been put into commercial use. So far, in the efforts along this line, it has not been possible to pay very much attention to color or gentleness. The supposition has been that if bees are resistant to AFB, no one need worry about EFB, and yet, some have been found resistant to AFB that are susceptible to the European variety.

In Europe more attention is being paid to Nosema than to AFB; in this country, the opposite is true. We shall hear more about Nosema, and yet, so far, it is impossible to reproduce it at will. In studying this disease, Dr. Farrar has raised and mated queens in greenhouses.

In the post-war period pollen is bound to be a big factor. During the season when there is a temporary shortage of pollen, trapped pollen supplemented with soybean flour supplies the deficiency and evens up the condition.

One of the most important of the post-war problems is that of studying the cultivation of honey plants. Alfalfa has been grown on the same ground for 60 years. Red clover acreage has nearly doubled but the seed production remains about the same.

Referring to amateur beekeepers, Mr. Hambleton does not consider that their activities interfere very much with commercial beekeeping.

Harold J. Clay

Harold J. Clay, of the U. S. Department of Agriculture, referred to the many syrups that have made their appearance. He called attention also to the imported honeys, some of them of very poor quality, that have flooded the markets. Some packers, he said, are trying hard to overcome the mistake of distributing this honey so widely. Mr. Clay feels that in the future, imported honey is not likely to be the nuisance it has been in the immediate past, for Great Britain is already paying three cents more for Caribbean honey, for example, than are the packers of the United States.

Mr. Clay emphasized the need of central authority to represent beekeepers of the whole United States.

Referring to square jars, so desir-

able for the packing of bulk comb honey, Mr. Clay pointed out that there should be an insistent demand through representatives in Congress and direct to the War Board, so that permission may be given at least one glass company to make the molds for the square jar production.

Mr. Clay referred to the possibility of the use of honey in certain polio remedies.

Beekeepers can do more than they realize. A post-war marketing committee was recommended.

G. G. Puett

G. G. Puett, of Hahira, Georgia, told his hearers that the package bee business consisted of one great big headache and a thousand small headaches. He referred to supersedure as the package shippers biggest headache. Twenty years ago they shipped nuclei and had little or no supersedure, and these nuclei developed into honey producing colonies very quickly. The stock or strain of bees is the foundation of the package bee business. A successful shipper must also have men and equipment. The men must be experienced for new helpers are only added headaches.

Mr. Puett stressed the need of temperature control beginning with the very time the bees are shaken into the cages. A cold temperature keeps the bees quiet and thus saves that much bee energy which would otherwise be wasted. Of course, too low a temperature would also be dangerous. During the period before shipment the bees should also be kept out of the light as much as possible.

Queens are not put in at the yards but after the packages are brought back to the shop. It is better if the queens can be kept in storage before being put in the packages so that the "weak sisters" can be weeded out.

The express companies are doing much better than they did a few years ago but they cannot spend all of their time taking care of packages. Nevertheless, if the packages arrive with the bees in good condition, there is much less danger of supersedure of the queens.

Mr. Puett told of preliminary experiments in transporting packages long distances in refrigerated trucks. He predicts a future for this means of transportation and even thinks it possible that shipment by air may become common.

Much depends upon the handling after arrival at destination. Mr. Puett recommends putting three pounds of bees on five combs, the older and blacker, the better.

Long straight rows of hives should be avoided. If possible, a location should be selected in the woods or where there is a windbreak. Similarity of appearance should be avoided to prevent drifting. There should be an inspection after one week, at which time there should be available extra queens to permit replacement if it is found that a queen is missing. Later on, more combs should be added and drone-laying queens replaced. The brood nest should be kept in the center of the hive and the combs should be kept closely spaced.

Dr. E. F. Phillips

Dr. E. F. Phillips pointed out the danger of injuring honey by injudicious heating, especially amber honey. He feels that at least half the honey placed on the market is not as good as it was when first capped over by the bees. One hundred sixty degrees mentioned as a safe heat in so many books is unsafe if that temperature is maintained even two or three hours. There should always be means for stirring or agitating the honey during heating, otherwise that next to the source of heat is apt to be burned before the rest is even warmed through. The hot water method of liquefying, unless there is agitation, is a very easy way to overheat honey, for the honey next to the outside of the 60-lb. can soon reaches the temperature of the water outside, while that in the center is but barely warm.

The Dyce process avoids many of the dangers to which honey is subject and he predicted for it a bright future. He showed samples of tupelo and other slow granulating honey reduced to a very fine grain by the Dyce process. A temperature of 150 degrees maintained for 15 minutes will kill the yeasts ordinarily in honey but when the honey granulates later, the crystals are coarse and uninviting in appearance. Fifty-one degrees is the proper temperature for the most rapid crystallization.

Dr. Phillips also exhibited samples

of honey and peanut butter, the possibilities of which for use by the Army are great.

The American Honey Institute

Mrs. Grace, in her usual charming manner, told of recent accomplishments by the Institute, and showed that honey is being recognized by food packers and dietitians as never before.

In the last year the Institute has ordered $12,000 of printing; 260,000 copies of "Old Favorite Honey Recipes" have been printed in all, requiring 26 tons of paper. A new edition will be ready shortly.

A new booklet containing many commercial recipes for bakers will soon be available.

Milk has long been known as one of our best sources of that necessary element, calcium. Mrs. Grace stated that there is as much calcium in a gallon of honey as in a quart of milk, therefore there is ¼ as much calcium in honey as in milk. What could be better, therefore, for growing children than milk and honey!

The greatest days of all for the American Honey Institute are in the immediate future. Surely producers everywhere cannot fail to recognize that now is the time to go ahead with new and greater plans for honey promotion.

M. G. Dadant

M. G. Dadant reviewed the history of the Southern Federation and made an eloquent plea that the Federation unite forces with the National; that each state be represented in the National in order that there may be a greater unity of action for the problems sure to arise in the days to come.

The fifteen southern states all have their own problems and he wished the Federation continued success in the future, for it has its own important work, a work that is attracting the attention of producers all over the country. He complimented the officers on the splendid showing they were making, and on the excellence of the program.

Seldom has there been a finer program or more carefully prepared addresses. Seldom has there been a more representative group of good speakers.

May the Southern Federation live long and prosper!

Bees Buried Under Snow

This picture was taken on March 12, 1941. Eight inches of snow fell during the night of March 11. Total depth of snow on the ground on March 12 was 30 inches.—C. B. Gooderham. Ottawa, Canada.

Observations of a Legal-minded Beekeeper

By Hon. Leonard Keyes
Judge of the District Court, Anoka, Minnesota

Given before Minnesota Beekeepers' Association, University of Minnesota, July 28, 1944.

Bees are classified as wild animals by the Courts of the United States. The rule of liability which attached for injuries caused by them differs from the rule of absolute liability which attached to the owners of wild animals. The owner of bees is liable only for damages caused by them due to his negligence. Negligence is usually defined as the failure to exercise such care as an ordinarily prudent person usually exercises under the same or similar circumtances. The same rule of law applies to the owner of an automobile in the operation of his automobile upon the highway. If he operates the same with reasonable care he cannot be held responsible for injury or damage, nor can a beekeeper who uses ordinary care in the management of his bees be held liable for injury or damage caused by them.

In many of our states the keeping of bees, under certain circumstances, in and of itself constitutes lack of reasonable care. The keeping of bees contrary to some state law or ordinance might impute negligence to the owner. Most states have laws requiring the registration of colonies and regulating the manner of keeping the same. These laws impose certain penalties, and it might well be that one of the penalties imposed makes a violation of such laws negligence per se. For example, in Minnesota the keeping of diseased bees is declared to be a "public nuisance," and action is given by law to any person whose person or property is injuriously affected by the maintenance of such nuisance. This type of liability approaches the liability imposed upon the keeper of wild animals and makes the unlawful beekeeper absolutely liable to any person damaged by reason of such unlawful acts. The fact that there has been little litigation in Minnesota involving beekeepers is a tribute to their friendly and unlitigious natures.

The City of Tracy desired to pass a bee ordinance declaring the keeping of bees a nuisance within the city limits. On May 23, 1934, the attorney-general of the state advised the city attorney of Tracy that it could not by ordinance " make that a nuisance which is not such in fact." The attorney-general quoted from the Town of Arkadelphia vs. Clark 52 Ark. 2311 S. W. 957, "Neither the keeping, owning, or raising of bees is, in itself, a nuisance. Bees may become a nuisance in a city, but whether they are so or not is a question to be judicially determined in each case. The ordinance under consideration undertakes to make each of the acts named a nuisance, without regard to the fact whether it is so or not, or whether bees in general have become a nuisance in the city. It is therefore too broad, and is invalid."

A decision of interest by the Minnesota Supreme Court is found in the case of Sampson vs. Penney 151 Minnesota 411, 187 N. W. 135. In this case Penney bought five colonies of bees from Sampson on May 1, 1919. He gave a note for $75.00 in part payment of the purchase price. The note not being paid, Sampson brought suit to collect the $75.00. Penney admitted giving the note but claimed that he did not owe the $75.00 by reason of the damages which he sustained for fraud on the part of Sampson in the sale of the bees. Penney claimed that Sampson represented that the bees "were all clean and free from disease," but that, in fact, they were afflicted with a disease known as "foulbrood." Penney placed the five colonies purchased near eight colonies of his own. The thirteen colonies were increased to thirty-six colonies from May 1st to July 9th. The evidence showed that some of the hives when inspected on July 9th were quite badly diseased. Penney claimed that each of the thirty-six colonies was worth $20.00. The Court instructed the Jury that Penney should be compensated for what he lost. The Jury gave Penney a verdict for $720.00, thus, in effect, giving him damages for fraud in the sum of $795.00 because he was relieved from paying the $75.00 note. In other words, the Jury must have found that the disease caused the destruction of approximately forty

colonies of bees. On appeal to the Supreme Court the trial court was reversed and a new trial granted. The Supreme Court stated the rule of damage as follows: "The direct damage for fraud which induced a contract is a difference in value between what the party defrauded parted with and what he received. In addition to this the party defrauded may recover consequential losses flowing naturally and proximately from the fraud. Where diseased animals are sold under a fraudulent representation that they are sound, the buyer is entitled to recover as damages the loss occasioned by the communication of the disease to other animals owned by the purchaser. Applying this principle, the defendant (Penney) should be entitled to damages on account of the loss of the other bees which he owned at the time of purchase. The damages for loss of the subsequent increase of the diseased bees seems to us quite too remote to be recovered."

Under the rule announced by the Supreme Court, Penney would be permitted to recover for the eight colonies which he owned at the time of purchase. The moral for beekeepers in the above decision is that when bees are sold as "free from disease" it is possible that the seller may lose not only the proceeds of the sale but may in addition be required to pay damages far in excess of the contract price.

Knowledge on Bee Diseases Essential

My legal experience together with my long experience of a summer and a half in keeping bees has caused me to come to two conclusions with reference to beekeeping. First, the most important thing to know about beekeeping is a knowledge of bee diseases, particularly the disease known as American foulbrood. Second, the most important thing to do in apiary management is proper wintering of colonies. As to bee diseases I have already indicated the fact that the law makes the keeper of diseased bees guilty of maintaining a public nuisance and attaches certain consequences to that act. In this day licenses are required before a person may engage in most lines of human endeavor. You must be licensed to sell stock, operate an automobile, sell cigarettes, operate a dance hall, sell soft drinks, engage in electrical or plumbing work, and even to curl or cut hair. Anybody, however, may hive a swarm of bees and manage and maintain them without any knowledge of their propensities and particularly without knowledge of the fact that these bees may become the source of infection and the cause of the destruction of all of the bees and bee equipment in the area where they are hived.

A certain son of Erin desired the position of keeper of a dog pound in a certain city. He was required to take a civil service examination to determine his qualifications. One of the questions asked him was, "What are rabies and what would you do for them?" He answered, "Rabies are Jew priests, and I wouldn't do a damn thing for them." He didn't get the job. I suspect that certain beekeepers, if asked what they would do for American foulbrood, would give a similar answer.

Every beekeeper should know the symptoms of American foulbrood. In fact, dead brood of any kind in a frame is a warning of disease. Last spring I found a small area of dead brood in one of my frames. My heart missed a few beats. The brood, however, was in a small compact area on the frame, and I replaced the frame in the hive. On a later examination I discovered that the bees had cleaned out the entire area. My conclusion then was that the trouble was chilled brood rather than foulbrood. In American foulbrood the dead brood is scattered irregularly about the comb. The cappings are sunken and discolored, concave rather than convex. The punctures are irregular in shape rather than round pinhole punctures. The dead brood is in the late larval or early pupal stage. At first it is watery and later ropy so that on touching it with a toothpick or stick the white ropy substance strings out upon withdrawing the stick. The tongue of the brood protrudes upward in a "stuck-up" tongue. In the later stages there exists a sort of gluepot odor. This disease is well described in Circular No. 392 issued by the United States Department of Agriculture. This circular may be obtained from Superintendent of Documents, Washington, D. C., for five cents and the information therein contained should be in the hands of every beekeeper in the country.

There is only one treatment for American foulbrood. That is to destroy all of the bees and burn the infected material. If the beekeeper does not do this, the state, where the law provides, has the right to summarily destroy the property without compensation to the owner. Such proceedings have everywhere been held to constitute due process of law. Inspectors are in most states required by law to destroy the property, and they can not be held liable in a civil action for any injurious consequences resulting therefrom, unless their acts are wilful, corrupt, or malicious, or outside of their jurisdiction. No beekeeper should complain when an inspector does that which he himself should voluntarily do.

Proper Wintering

While there are many things which go toward successful apiary management, nothing, to my mind, is as important in the northern parts of the United States as proper wintering. Last year I had five colonies of package bees. This spring I secured twenty-five more packages and set them out on April 1st. Today my five wintered-over colonies have an average of one hundred pounds of surplus. This year's package bees have no surplus on hand. The only thing that explains the difference in production between these two colonies, to me, is the manner in which these bees were wintered.

Of course, fundamentally wintering begins in the latter part of August, and three things are then necessary: one, a vigorous queen (requeen if necessary); two, lots of bees (look for young bees); three, lots of stores, especially pollen combs. In September and October feed sugar syrup solution if necessary, two parts of sugar to one of water. In conditioning the hive body, ventilation for the purpose of permitting the release of moisture from the inside of the hive during the cold winter months is an important consideration. Bees will not die from the cold, but they will suffer serious losses from moisture inside the hive. All of my hives faced South, but the south side of the hive was left unwrapped. The other three sides of the hive were covered with cheap roofing paper which was sufficient for the purpose of keeping the wind and moisture out of the hive. Two of my colonies were wintered in three hive bodies, two food chambers over the brood chamber, and the other three colonies were wintered in two brood chambers. An inner cover was inverted over the top hive body with a strip of shingle under each side of the inner cover with the wide portion of the shingle at the south end of the hive. This permitted an upper entrance between the hive body and the inner cover. Over the bee escape hole was placed a screen or burlap. On top of this inner cover shavings and leaves to a depth of several inches were spread. The moisture from within the hive body escaped into the leaves and shavings through the bee escape hole and from there on out into the open air. On one of my colonies I placed a shallow super over the inner cover and filled this super with leaves and shavings. On opening the hive this spring I found the leaves and shavings perfectly dry, but the super body completely saturated with water so that the paint on the outside of the body was raised from the body in large water blisters. This situation indicated to me that the best thing to use to contain the shavings and leaves was the roofing paper which I had wrapped around the hive body. Have that folded in under the hive cover so that the moisture from the hive escapes into the leaves and shavings and from there on out into the open air. It is better to have too little insulation than too much.

January and February this year were mild winter months. During the Jaunary thaws the bees were carrying water into the hives very actively. This indicated brood rearing during January. In the latter part of February and the early part of March I placed trays containing four parts of soybean flour to one part of dry skimmed milk near the colonies. The bees carried this pollen substitute mixture into the hives readily, and I found on examination of the colonies in March that each colony contained several frames well filled with capped brood. The soybean flour used was known as "Cherry Blossom Soybean Flour." The solvent has been extracted from it and it is then heated. This was secured from Archer Daniels Midland Company of Minneapolis, Minnesota. The dry skim milk was secured from the Twin City Milk Pro-

(Continued on page 563)

From the Field of Experience

PRODUCING COMB HONEY OVER DOUBLE BROOD CHAMBER

By L. E. Bingham

I have read that it is impossible to produce comb honey on double brood chamber hives. I do not agree. I have been able to produce comb honey of good quality, completely capped, by the following method on double hives:

On top of the upper body place a comb honey super. On top of the super place a queen excluder and on top of the excluder place a hive body with combs or foundation. By this method there is plenty of room for newly hatched brood which will assist in swarm control, also the bees will fill the comb honey super before passing through the excluder to the hive above. Just how many supers can be added with satisfactory results I can not say as I just found this method this year but will continue to experiment next year.

Plattsburg, N. Y.

(We have produced section comb honey over colonies in two-story brood chambers. Colonies must be very populous and conditions favorable for nectar secretion. We have also supered on top in producing section comb honey over two-story colonies. One has to actually see it done or do it to be convinced this is possible. —Ed.)

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BOYHOOD RECOLLECTIONS

By Weston H. Jeffers

All this recent discussion of top entrances takes me back 40 years to my boyhood and how it was done in the town of Haverhill, a cold section in northern New Hampshire. Although bees were not much kept in that area, I have happy recollections of "Honey" Davis, a near neighbor, who in his earlier years had wandered south to Florida and Cuba where he had a colorful, though not very profitable, experience as a commercial honey producer.

Then there was his successor in the locality, Rex Pierce, to whom I owe my early interest in bees, as a result of which contact I have continued ever since to keep a few colonies as a hobby. Being a near neighbor, I often watched him work with his bees, putting on supers and taking them off full of fine quality clover and raspberry honey. He had about 20 colonies and practiced both indoor and outdoor wintering. Those which were left on their stands were in double-walled hives, with telescoping cover, pitched roof, and one-half inch auger hole in the upper front part of the cover. The packing was of chaff or sawdust and upward ventilation was given through burlap laid on top of the frames with packing on top of it. In that cold dry air such an arrangement gave the bees excellent protection, bringing them through to the spring ordinarily in fine condition. I hope in this coming summer to return to that section and one of my aspirations is to find one of those old double-walled hives of my boyhood.

Florence, Mass.

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WORLD'S OLDEST ACTIVE BEEKEEPER

By Mary M. Campbell

Eighty years as "keeper of the bees" is the unusual record of Reese Powell, 90 year old beekeeper of Riverside, California.

Eighty-one years ago a lad of ten

Reese Powell, the vigorous 90-year-old beekeeper.

harvested 16 pounds of rutabaga seed from the home garden in Mineral Point, Wisconsin. This he sold for a dollar a pound and with the money purchased his first two colonies of bees. These two colonies soon grew into a full time business.

In 1887 at the age of 23 young Powell decided sunny California offered opportunities for beekeepers. Selling his colonies he moved to San Bernardino, California, where he again became a beekeeper, immediately purchasing 108 colonies. These he cared for while working at the carpenter trade. He soon discovered that 46 of his colonies were diseased, but succeeded in curing this trouble and despite the setback, his bees produced eight ton of extracted honey, which was sold for five cents a pound.

In 1887 there were few orange groves in Southern California, the honey being gathered for the most part from wild sage and buckwheat blossoming in the Riverside and Redlands area.

The first orange blossom honey was unpopular both with consumers and producers due to the fact that it was thin, but producers soon learned that if left to "ripen" it became a most desirable product.

Mr. Powell has worked alone for 56 years but has been a carload producer of this most popular sweet. He recently sold 300 of his colonies, but still cares for 250 and plans to be in the bee business as long as he is able to care for them. During 1943 his colonies averaged 140 pounds per colony.

For 14 years Mr. Powell served as the president of the Riverside County Beekeepers' Association; he was also inspector for Riverside County during this time.

Mr. Powell recently observed his 90th birthday, and believes he is the oldest active bee man in the world.

Riverside, California.

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"SERVE-YOURSELF" HONEY MARKET

By Darline Storey

Mr. Otto Henderson, Franklin, Indiana, is another successful beekeeper without a marketing problem. All of his honey crop, averaging five ton annually, is sold direct to the consumer, yet he seldom sees his buyer. He conducts a "serve-yourself" direct from the front porch of his attractive country home.

People come for miles, despite the present gas rationing. The honey is packed in five-pound glass containers and awaits the buyer upon a small platform. On this platform is printed, "Take the Honey—Leave the Money." In his 30 years of beekeeping and honey selling he has never had a customer cheat him. Instead his cash is usually over. Once a customer lacked a nickel, but took the honey anyway. A week later Mr. Henderson found a note written up in verse wrapped around a nickel. The verse explained the shortage.

Mr. Henderson believes people are honest if they are really trusted. He explains it this way, "Even a bandit if coming for honey would feel pretty small to walk away without paying—especially when he could do so—so easily. Human nature is a funny thing, indeed."

The first colony of bees was given to Mr. Henderson by an uncle. He proudly tells how he built up his bee business. He says that gift was one of the best things that ever happened to him because it not only gave him a lifelong interest but also a nice steady income. He feels that beekeeping is a wholesome work that will greatly enrich any man or woman's life who has any love at all for nature and her wonders.

Indianapolis, Ind.

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QUEEN SURVIVES COLD AND MAKES GOOD

By L. Lloyd Van Epps

Some weeks ago I telephoned for a queen and received her the same day. I phoned the order on Saturday and did not expect the queen to arrive until Sunday as I had ordered her sent special. I went out in the evening and did not return until about twelve o'clock. It turned terribly cold about eleven, the temerature dropping to 38. When I returned I opened the front door to give the dogs their run and I found a notice stating that the queen had been delivered at seven and had been left in my mail box. I rushed to the box and got the cage but all the bees were on their backs and stiff. I began and completed a method of restoration that was very unique. For one hour I held the cage close to my mouth blowing my breath upon the bees. After

about one half hour they began to move a trifle. I took a dropper and put some warm sugar syrup in the cage. It being very cold in the house and not wishing to start a fire in the furnace I then took the cage and put it next to my body under my pajamas and went to bed figuring that the warmth of my body would help. It did, for in the morning the bees seemed to be in first class condition. I then sprinkled syrup on them and smoked them good and released the queen direct on the combs. After one week I inspected the hive. While the queen seemed all right she had not laid an egg. I decided to give her another week and on that inspection I found she had filled several frames with brood and at present she is one of the best I have.

Youngstown, Ohio

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TELLING THE BEES

By Elizabeth Linn

(Apologies to John Greenleaf Whittier)

There are his beehives ranged in the sun:
And down by the brink
Of the mill race where pinks and tall grass o'errun,
The honeybees still drop down to drink.

I recall how with a lover's pride
He opened the hives,
Lifting up honey frames, side by side,
Watching the bees toil the span of their lives.

A year has gone, as the tortoise goes,
Heavy and slow;
And at last we know! And the same sun glows,
And the gold bees sing of a year ago.

There's the same sweet-clover smell in the breeze:
And the June sun warm
Tints the bees that drone in the pear trees,
Droning, as then, over Gildrae Farm.

I can see it all now,—the slantwise rain
Of light through the leaves,
The sundown's blaze, meaning work must wane,
The bloom of blossoms among the leaves.

Just the same as the year before,—
The house and the trees,
The killdeers' high call, as they wing and soar,—
Nothing changed but the hives of bees.

Before them under the garden wall,
Forward and back,
Went drearily singing a woman small,
Draping each hive with a shred of black.

Trembling, I listened; the summer sun
Had the chill of snow;
For I knew she was telling the bees of one
Gone on the journey we all must go!

And the song she was singing ever since
In my ear sounds on:—
"Stay at home, pretty bees, fly not hence!
Sergeant Tommy is dead and gone!"

Telford, Pa.

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OBSERVATIONS OF AN AMATEUR BEEKEEPER

By C. O. A. Kramer

Upper vs. Lower Entrances

I think it was Dr. C. C. Miller who wrote "When I am in doubt I leave it to the bees." This statement is forcibly brought to mind quite frequently when I read some of the recent articles in the various bee journals, anent how to do this or that for the bees. In fact, there should be a law passed by Congress making it compulsory for every beekeeper, amateur or professional, to read Dr. Miller's "Fifty Years Among the Bees" at least once a year.

Much has been written about upper entrance versus lower entrance during the past few years. Statistics have even been brought to bear on the subject and you know, of course, that statistics never lie. For a number of years I used the 3½-inch reduced lower entrance with fairly good results, although some of my hives, especially those with a fairly good swarm, appeared to have ice formation on the inside during severely cold weather. Although I have never examined them in the depth of winter, I judged from the resultant water coming through the front entrance in warmer weather, that this was the case.

As I have always wintered my

bees in two-story hives I deduced that an additional opening in the upper hive body would be of benefit. I therefore used a half-inch auger and made a neat round hole right in the hand-hole of the upper hive body for added ventilation. (Later, when I found that a bad place to put the hole, because the bees left a few stings in my finger tips, I made it below the hand-hole.) This seemed to relieve the freezing condensation to a great extent, and the bees seemed to like the upper opening on these warm days when they could take a flight.

Now, I said to myself, we have perfect air conditioning. But the bees thought otherwise. With the first warm days I found that my bees took the dead bees and practically plugged up the lower entrance and used the half-inch hole in the top for a flight hole. Thinking that the bees had become careless, I carefully cleaned out the dead bees, but when the next warm spell came along the bees again carefully plugged up the bottom entrance and used the upper hole for flight purposes.

So, having left it to the bees, and the bees showing me that they did not like my air-conditioning, I turned the entrance blocks so as to give them a bottom opening about an inch long by a quarter inch high. Today I found my bees carrying out the dead ones and leaving the one-inch opening carefully cleaned out. Thus I figure that they have shown me that the lower entrance as it now is fulfils their requirements for the proper air-conditioning that they desire.

River Forest, Illinois

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OBSERVATION HIVE IN LIBRARY MUSEUM AT DAYTON, OHIO

By Penn G. Snyder

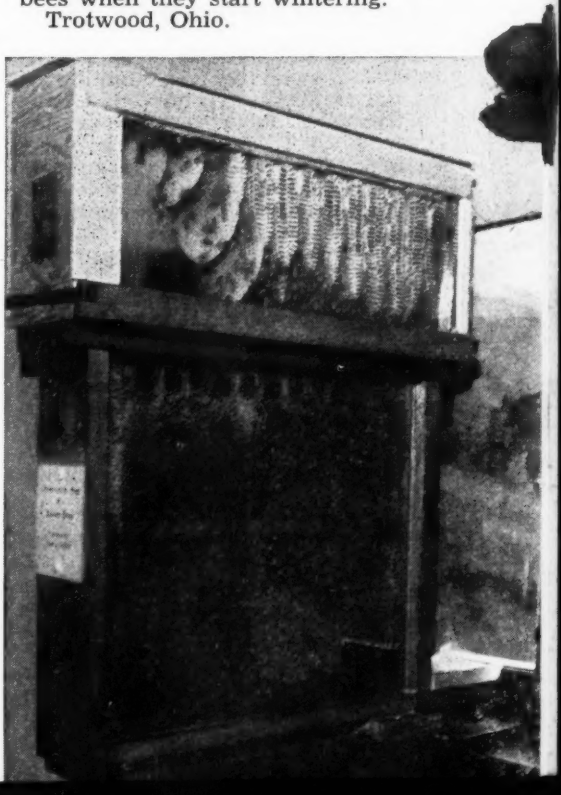
I have had a varied experience with an observation hive and failed so many times (from 1905 to 1925) that I came to the conclusion it could not to be kept in a building. I then hit on the plan of having double glass with a quarter inch air space between. My troubles were then over. This prevents the sudden change of temperature and with sufficient food there is little or no trouble with the hive. However, there have been changes in the personnel at the Library and during the past season the bees did not get food as they needed it. They swarmed very late in the fall and were lost. So the hive is empty at the present time. However, it will have bees in it again in a few weeks. (This was written March 31, 1944.)

The Director has told me repeatedly that the bee exhibit is the one most asked for by those visiting the Museum. The Dayton Library has the Museum under its direction which is now in a different building across the street from the Library. The bees are in the Library Museum.

The colony has been in this building for about twelve years. Outside of feeding it requires but little attention.

You may note there is a Hoffman frame and above it a shallow extracting frame. There are two openings covered with queen excluder from the bottom or observation hive leading into the honey storage box above. This prevents the queen from leaving the observation part in the winter. If they have plenty of bees everything goes all right. They should have about two to three pounds of bees when they start wintering.

Trotwood, Ohio.



A twelve-year-old colony thrives in the Dayton, Ohio, Library Museum.

SECOND GLANCES

By C. M. Isaacson

Research work is of value not only in development of new methods, but in evaluating results of past observations and correcting popular misinterpretations. Prof. Milum's report (page 473) on the cluster temperature of wintering bees shows plainly that the 57 degrees F. temperature determined by Phillips and Demuth is the point at which the bees begin to cluster tightly, and subsequently generate heat, **not** the average maintained temperature. The difference is important. Several more items in this article should be kept in mind—having honey above the cluster because of the difficulty of lateral movement during cold spells, and the fact that there is not always a movement of bees from inside the cluster out. His succeeding article should be of considerable interest.

The very many varieties of honey plants in England would make for many kinds of honeys, but the fact that white clover is the chief nectar yielder shows again the dependability of the clover family over wide areas. And the mention of the pussy willow brings an echo of familiarity (page 476).

Flowers and honey! Seeing that nearly all honey derives from flowers, the combination is not only an attractive one, but very appropriate. (Page 477.) L. A. Luedtke's place must be a beautiful sight during the period of gladioli bloom. And leaves do make excellent packing material, perhaps the best. His saving them from year to year is wise—they improve with use.

A true Thanksgiving can be held under any circumstances, but if on that special day we are able to add a bit of cheer, it is all the better for our realization of the real blessings we always have. And to help add that cheer, have a few of the foods prepared from Mrs. Nielsen's recipes. They are simple—and they must be good (page 478).

The new thesis of wintering can be expressed in one word—abundance! Abundance of honey, of pollen, of room and bees. It is just as simple as that. But Mr. Root is correct in recommending trial before complete adoption, especially until more localities have tried out the new ideas in full (page 480). Many bees, much honey and pollen—surely few will dispute these points. But wintering in multi-storied hives is a point more open to question, and that applies particularly to three bodies. Two stories are good, three have not worked out well in this territory. But upper entrances are here to stay—and that means extreme top openings as a rule (for winter). Likewise lighter packing, for the amount being used is steadily decreasing.

House wintering of bees is something not often met with nowadays, so Mr. Scott's article is all the more readable (page 481). The use of sugar syrup for winter food, coupled with 20 years of good wintering, correlates with C. A. Pease s recent report from Connecticut. Bees **will** winter on **either** sugar syrup or honey. To me, the deciding point would seem to be one of individual convenience and situation. Of course, the larger the apiaries, the more work is involved in any program of feeding.

Late fall supersedure of queens may be bad, resulting in too few young bees for wintering or queenless colonies in the spring, as E. S. Miller points out (page 482). But earlier supersedure, immediately after the main flow, will—provided the stock is good—usually result in excellent queens and strong colonies with a good reserve of pollen (this last is a point sometimes overlooked.)

Post war planning will involve many different factors. Mr. Tetrick's item summarizes a number of them in clear and concise fashion (page 438). Increased production (of honey and wax), cooperation in both producing and selling, adequate research, support of the American Honey Institute—all these are desirable and well put.

Pollen substitutes have been a much discussed thing of late (page 484). One Man's Opinion asks a question with a challenge. If dried milk and soy flour **are** a complete substitute, **why trap pollen?** Both materials should be easy to procure and reasonable in price after the war. Can someone answer?

Look up! Does not a true beekeeper always do just that? Spinster Jane has expressed it well. We don't look back at a poor crop, a hard season, but to the next (big?) one! Yes, and the beauty "above" us gets many a second glance.

Aster honey for winter. I believe the Editor has given a good answer

to this question (page 492). If ripened well, it is perfectly satisfactory; if cold weather prevents ripening, it may cause trouble.

Sulfa compounds are marvelous drugs. All beekeepers will await with eagerness the results of experiments completed (and under way) as to their use in combatting AFB. Maybe —— —— —— (page 493).

Sweet clover is disappearing in many localities, as the Editor mentions on page 493. And in my territory, other crops are not the main reason, but rather the rapid spread of the clover weevil. I might mention here that the honeybees themselves are often blamed by uninformed farmers for what is really weevil damage. It is a bad situation in places.

Middle River, Minnesota

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RE BEES GNAWING BOTTOMS OF BROOD COMBS

By J. E. McKee

C. M. Isaacson, November Gleanings, page 485, almost states some facts, but I have had very strong colonies murder perfect combs and in no case have I observed it being done in a depression or dearth of nectar. Now, E. S. Miller says to use full sheets of foundation and pull the combs above the brood nest. Then he says to melt up the combs when the bees wreck them. I've been doing just that all these years. But will Mr. Miller kindly tell WHY the bees will wreck them?

Alpine, N. Y.

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A HONEY DIET

Carolyn Fife, 14 months, has grown from three to eighteen pounds on a diet which has never been lacking in honey. Carolyn's daddy looks after two hives of bees and last summer had a victory garden. . He is teaching Uncle Sam's air force cadets how to pull their punches against the enemy.

LADINO CLOVER IN IDAHO

There appears to be considerable interest in Ladino clover, both from the agricultural and apicultural stand points. Beekeepers are naturally interested in a clover that secretes nectar.

The following from a commercial beekeeper, A. D. Wood, Meridian, Idaho, is of interest:

In reading your editorials on page 492 of the November, 1944, issue, I notice what you have to say regarding Ladino clover. I had little experience along this line last summer, as follows:

I moved about 40 colonies near a 35-acre plot of Ladino clover that had been pasture and then let go for a seed crop after it began to bloom. The season was dry and short. Around this field of clover there was a strip of alsike clover about 10 feet wide for some reason, presumably for harvesting the seed crop. During the height of the flow bloom was immense on both clovers. I found more bees working the alsike than the Ladino, but the number on the Ladino was large.

My conclusions are that Ladino is a good honey plant, maybe not quite so good as white Dutch or alsike, but a close second. I talked to a reliable honey producer who told me that Ladino was the better of the two. This next coming season I shall observe it again.

Incidentally, I didn't learn how the seed crop on the Ladino clover turned out, but most seed growers report around a 300-pound seed average per acre, some as high as 800 pounds where there were bees and as low as 50 pounds where there were no bees, so who says bees aren't valuable?

Seed growers do realize the value of bees for pollination of clovers and most of them offer bee locations free.

We should appreciate reports from other beekeepers over the country as to observations regarding Ladino.

From North, East, West and South

N. CALIFORNIA, Nov. 3

Weather: Here in the Bay area October was another summer month. We had but one light shower of rain during the summer and that came in October. It did not amount to much more than enough to wash the dust off the leaves of the trees and vegetables. On the 30th another rain came and it was a real rain. At noon it commenced to sprinkle and continued growing stronger till the morning of the 31st. In the evening papers this headline appeared, "Rain Fall Sets Record." This follows: "First of all, the rain fall as of 4 p. m. yesterday was the greatest rainfall in October history for any consecutive 24 hours, the largest ever recorded by the Bureau." Does it mean a good honey year in 1945?

Condition of Bees: There was little nectar during the last month so they made good use of their time filling their hives with pollen. The way they are sealing up their hives with propolis might indicate a long and chilly winter. Bees properly cared for will go into winter with plenty of good stores, pollen, a young queen, and plenty of young bees. Bees not properly cared for may be dead next spring. For the past month for our entire area temperature averaged slightly above normal; slightly below normal along the coast.

Too many colonies in the Sacramento Valley are light in stores. The fall flow ended almost a month earlier than usual. In the lower Sacramento many colonies were seriously injured by arsenical dusting of tomato crops. Many colonies are already dead and others will likely die before winter. Beekeepers must do more than they have been doing to prevent this careless use of poisons or there will be thousands of acres of good bee pasturage without bees.

Markets: Beekeepers are beginning to feel the need of new trucks, or repairs for the old ones so that they can get their honey to market. This and the shortage of help has caused some to talk about selling their bees. The call for honey is good at the ceiling price.

Beeswax: Soon after extraction commenced beeswax began to come in and some thought the shortage was past but the demand is the same and beeswax is scarce.

Miscellaneous: In addition to the question of poisonous dusting there are two more subjects interesting some of our wide awake beekeepers. The first is the tendency on the part of some beekeepers to ignore all honey but the kinds they produce. This is not good salesmanship.

The second is, "We want more new honey plants and a more careful description of them by writers." We happen to know two good authors who are revising their books at this very minute. One writer calls our attention to the failure of authors along this line and finishes by saying, "You will understand that I am very anxious to clear up such points as definitely as possible in order to place dependable information before the readers."—Cary W. Hartman, Oakland, Calif.

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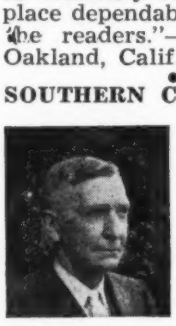
SOUTHERN CALIFORNIA, Nov. 2



Weather: This does not seem like November 2, judging by the weather. It is a little cooler, the days shorter and the nights a little longer than during summer. As for rain or other indications of fall, we have had none.

Bees pick around on a few blossoms but locations where they can find enough nectar to keep up the weight in the hives are few and far between.

Crop: Taken as a whole this has been one of our short crop years in Southern California.

Miscellaneous: Here and there scattered over parkings and vacant lots one can see alfalfa growing and blooming profusely. How the seed gets scattered is a conjecture. Have we as farmers or beekeepers been making the best of our opportunities? Once the roots get well

established the plant thrives year after year. The soil where we live is adobe or heavy clay but the alfalfa seems to grow just the same.

One of the lost opportunities is our neglect to plant trees in our great open spaces and brush covered hillsides. An illustration of what might have been is plainly seen in the few eucalyptus and pepper trees that are growing here and there where a few have been planted. They improve the landscape, conserve the moisture, and furnish nectar for the bees.

This is probably as near the dormant season in the way of brood in the hive as we have in Southern California. There is no time in the year when a little brood cannot be found in an occasional colony.

We can now begin to take stock of the season's operations. That we had sufficient rainfall in Southern California to give us a honey crop if evenly distributed and favorable weather conditions had prevailed, few will question.

The movement of bees to the orange was the greatest ever. Then to the sage, wild buckwheat, alfalfa, cotton, blue curl, thistle, or what have you. All seem to have gotten some honey, saved their bees, and are looking forward to and getting ready for the 1945 honey season.

The treats are on me: The notation in our last letter about the article in Saturday Post should have read August 12th instead of July 12th. Sorry.—L. L. Andrews, Corona, Cal.

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TEXAS, NOVEMBER 1

The weather for October was ideal for the most part, the days clear, calm, and warm. A light rain the first week brought on a honey flow from white brush. Most hives put on a six pound surplus which came at just the right time to be used in fall brood rearing. This flow together with some little nectar from composites was sufficient to offset that used by the bees in brood rearing and daily consumption.

Conditions: This month gave a fine demonstration of the fact that a known honey plant may be in flower in great quantity and not secrete nectar. At the beginning of September broomweed **Gutierrezia texana T & G** was available in immense quantities and the beekeepers surmised a broomweed honey flow; however, the weather was auspicious but no honey flow. The bees did, however, bring in for stores some pollen from this source and a very small amount of nectar. Extended observations found that very few insects visited the weed. During the examination of 50 hives at the end of the month abundant stores of pollen and honey were present. With the exception of daily needs no storage of either has taken place for three weeks, although pollen plants are blooming freely in easy reach of the bees which leads to the supposition that bees may have some estimate of the proportion of cells to be filled. This statement applies only to hives from which no honey has been removed or no change of combs during the past summer or fall encouraging the bees to store large amounts of pollen. All reports are that bees are going into winter quarters in better than normal condition.

Miscellaneous: The Daily Press reports that the Census Bureau is establishing an office in San Antonio with trained workers within a very short time. This is being done to obtain an accurate knowledge of the distribution of the resources of the state. —H. B. Parks, San Antonio, Texas.

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COLORADO, Nov. 6

Weather: September and October were exceedingly dry and above normal in temperature, leaving the honey plants in none too good shape for their winter sleep. We have had, to date only a few light frosts east of the Rockies. Today we are having some heavy thunder accompanied by rain. The weatherman may be right, he emphasized snow for tomorrow.

The honey flow in eastern Colorado opened with a fair promise of a good crop and extracting began early in July to make super room for honey from the second cutting

of alfalfa. Hot, dry weather, however, interfered with the yield from this cutting and was climaxed by severe hailstorms in August which ended the honey flow and left hundreds of houses in the Pueblo and Denver area with splintered roofs and many windows broken. Probably about 75 per cent of a honey crop was harvested.

Crop Conditions: In the San Luis Valley the flow slowly began about two weeks later than last year and after lingering along through the short season came to an end by the last of August when a frost cut it short. Thrips which infested the blossoms in great numbers are believed to have been a factor in the poor yield. It is generally admitted that only half a crop was harvested here.

The bees are, as a rule, going into winter strong and with ample stores. Brood rearing was kept up well into October. Some pollen is still being gathered on warm days.

Sales of honey at retail are not as heavy as last fall. Packers, however, are eager to buy what they can to supply their trade.—G. A. Pauli, Pueblo, Colorado.

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MINNESOTA, Nov. 8

Weather: Early fall rains were stimulating to honey plants, and balmy October was all beekeepers could wish for doing bee work.

Crop Conditions: Not since the drouth years of 1934-'35 has Minnesota harvested such a short honey crop. Wet weather has been blamed but decreased sweet clover acreage seems the greater cause. Beekeepers with several outyards found some yards with fair sweet clover pasturage gathering twice as much honey as poor-pasturage yards. The short crop and an active demand at ceiling prices has disposed of 75 to 90 percent of the crop already. Considerable fall nectar darkened the color of extracted honey but helped greatly for winter stores. More fall sugar feeding than usual was a consequence.

Miscellaneous: Many queens stopped egg laying early but resumed for a few days with good weather. Most colonies had ample bees, pollen, and honey for winter. Nectar plants made fine fall growth and the more plentiful Dutch clover may make up partly for the decreased sweet clover next year.

American beekeeping has lost one of its outstanding authorities in the death October 25 of Dr. M. C. Tanquary, of the University, at St. Paul. His gentle manner endeared him to all who knew him, and Minnesota beekeepers mourn his passing.—Bruce Morehouse, Montivedeo, Minn.

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ILLINOIS, Nov. 3

Weather: Today we are experiencing some unusually high temperatures for this time of year. Instead of hunting out our coats and overshoes we are enjoying real shirt sleeve weather. What few honey plants we have left, such as sweet, white, and alsike clover, are in need of additional moisture. It has been several weeks since we have had any rainfall except a light sprinkle. The long dry spell has been very serious for farmers. Small streams and many dredge ditches have been dry and dusty for some time. Forest and grass fires have been numerous especially in the southern part of the state. The dry weather during our June and July honey flow was ideal for nectar secretion. The honey was of extra fine quality. The lack of honey producing plants gave us only one half crop.

Condition of Bees: On October 31st, we finished packing our colonies for winter. It was a bit warm for this preparation, but this kind of weather never lasts all winter. Our packing cases hold two double story colonies and they do not require too much packing. We found our colonies in better condition than they have been in for three years. For the first time in three years there was some honey left after each colony was supplied with an extra body. The colonies had an adequate cluster of young bees which is very desirable. The winter loss should not be as large as we have had the past two winters.

Miscellaneous: Our disease situation is much improved over any previous year on record. When our reports were compiled for the fiscal report, our disease showed 4.4%.

Our calendar year of inspection has just ended and figures are not available as yet, but they should not be far off from our June 30th amount. One of the most serious problems, besides bee diseases, confronting beekeepers in Illinois and many of our states is the lack of honey plants. Agriculture has made such radical changes. The planting of legumes and crop rotation is not followed. What legumes are planted are plowed under green and are not allowed to bloom and seed. One can see only corn and soybeans as you drive across our state. This condition is freezing out the honey producers. They cannot survive without honey producing plants in quantity enough to give them a surplus. Conditions such as this are dangerous to our agricultural program if and when the planting of clovers is resumed.

Bees are going to be needed and some plan must be followed to provide bees for these areas. Our State Division of Highways has shown its willingness to co-operate where possible in planting honey and pollen plants, shrubs, and trees. It will be up to each and every beekeeper in this state to see that the county roadsides are accidentally seeded with honey plants. Every available acre of waste land must and should be planted by beekeepers near their own apiaries. I personally would like to suggest state associations raising their dues and using this extra money for a honey-plant planting program.—Carl E. Killion, Paris, Illinois. (P.S.—It has been raining about four hours this p.m.)

As Mr. Killion suggests, every available piece of wasteland should be seeded with honey-producing plants. Along railroad right-of-ways sweet clover is frequently seen growing.

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NEW YORK, Nov. 2

Conditions: We have experienced a relatively warm and dry fall. Bees have gathered a larger than average crop during this period from goldenrod and aster.

Today, while packing the last of our apiaries, we noticed bees bringing in large loads of both light yellow and orange colored pollen. The source of this pollen remains a mystery since heavy frosts have occurred a number of times.

New York beekeepers finding feeding necessary have had considerable difficulty in locating sufficient sugar for this purpose. Many have found that a permit to buy sugar does not insure its being available.

Miscellaneous: Having done considerable moving the past few years it is a constant source of satisfaction to see how well the porch type of entrance screen works in moving bees both short and long distances in spring and fall. With this type of screen the bees are allowed to crawl out the entrance and up the front of the hive. They often do this when the screen is first put on and then go back inside apparently satisfied that all is well. Bees moved in this fashion are seldom cross on arrival at destination and we have, on a few occasions, actually supered a yard immediately upon unloading it from the truck. We placed one and two supers on each of 50 colonies, and then removed the porch screens, finding very few bees interested in flying out. Perhaps I should hasten to add that we did not try this when unloading after dark. When moving full colonies in midsummer both porch and top screens are used to good advantage. During cool weather we often move apiaries with entrances open.—William L. Coggshall, Ludlowville, N. Y.

ONTARIO, Nov. 8

Weather: The Toronto Observatory has just issued its latest monthly report and they state that the month just passed was the driest October for the past 103 years, with a rainfall of just .52 of an inch. As the last two weeks of September were very dry and November up to date has had no rain, this is probably the longest period of drouth that this part of Ontario has ever experienced. While a prolonged drouth like this would be fatal to clover and many other forms of vegetation if occurring in the summer months, it has not the same effect at this time of the year, with cool nights and moderate temperatures during the day. Wild white clover which is one of the first plants to show the effect of dry weather appears to be all right, so we judge that alsike and alfalfa as well as sweet clover have not been affected. While we would like to see rainfall before winter sets in to fill up wells, etc., no question but that this long dry spell has offered ideal conditions to get bees ready for winter, and if thorough preparations have not been made, the beekeepers cannot blame the weather. The boys were able to work with the bees every week day in October, and that is certainly a record.

Incidentally this allowed them to get through with winter preparations for the bees, much sooner than they thought would be possible, and this week they are away for a few days in the North country on a deer hunt. As for the "pater"—well, he does not work hard enough during the summer to earn a holiday, so he is home looking after a larger crop of mink kits than usual, expecting to start to pelt them next week. We started in the mink game as a hobby, and now we are getting a real kick out of the game, raising some of the mutations that are being developed. A few years ago a price of $300.00 or more for a live mink would have sounded fantastic, but now it is so common as to cause little comment.

Crop and Market Conditions: Latest reports seem to point to a much smaller crop of honey in Canada than was anticipated earlier in the season. Just where all the honey has gone is quite a live question, locally at least, as we have people asking for honey nearly every day. Stores in the towns nearest us have little if any available, and none whatever in packages larger than two pounds each. Owing to being unable to get metal tins larger than the two-pound size, we did not put up any for home trade. Then again we wished to get rid of the monthly reports as soon as possible, and have none of this to bother about until another crop is to be sold. Some 16,000 pounds were sold at our plant during the extracting season and about the same quantity of dark honey was sold to a bottler. All the rest of our crop was consigned to the Honey Producers' Cooperative, and the manager of the plant tells me that their sales are just governed by the amount they are able to get ready for the market Where it is all going I cannot say but they tell me that distribution is general almost all over Canada from coast to coast.

Miscellaneous: Advance notice states that the Ontario Beekeepers' Association will hold its annual meeting on Dec. 5th, 6th, and 7th at the Royal York Hotel in Toronto. While the crop of honey in Ontario has been spotted and very lean in some localities, no doubt there will be a good attendance, as an experience of well on to 50 years has led me to believe that beekeepers in Ontario also attend the Convention no matter whether the crop is big or small. With a number of speakers "from over the line" expected to take part, no doubt many of our friends from the United States will be present. We sincerely wish all readers of Gleanings, a happy Christmas and a prosperous New Year.—J. L. Byer, Markham, Ontario.

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Marshmallow Honey Cherry Sauce

One-third cup honey, 2 tablespoons water, ½ cup confectioners' sugar, ½ teaspoon vanilla, 1 egg white and ⅔ cup chopped sweet cherries.

Heat honey and water; add sugar gradually, while stirring, and cook 5 minutes. Add flavoring. Pour slowly over stiffly beaten egg white, while stirring; beat until fluffy. Fold in cherries. Yield: 2 cups sauce. Cherries may be omitted if desired. —Mrs. Benj. Nielsen.

Spinster Jane Says

Mind Over Matter

We have had rather nasty weather with a few beautiful Indian - Summerlike d a y s thrown in, but we should not complain. This is one of the seasons when we should look up, but it is a hard thing to forget the mud and look for beauty when your car gets stuck fast in that self-same mud. That is the time to think of our soldiers bogged down, yet slugging ahead foot by foot in much deeper mire. Then be happy that we are where we are with conditions no worse.

What a wonderful effect mind has over these bodies of ours! We can have better health if our minds are sane and healthy. We are really **as we think.** If imagination runs riot and we think we are sick we really become ill. Is it not then of first importance to keep cheerful and happy?

Learn to Use Honey Regularly

Our bees will fly today, Nov. 14th, as it is sunshiny and mild outside. All are being wintered out-of-doors, thanks be, and we look forward to stronger colonies next spring because of outside wintering. Boy has most of them securely and warmly packed and is seeing that all are well fed early. This will mean not disturbing them when once they settle down for the winter. Many, well stocked with honey we had left with them, had used up a good bit of this surplus and had to be fed syrup to replenish their winter stores.

The sight of two bags of sugar for feeding the bees did not tempt us an iota. In fact we are getting used to doing without the abundance of cakes and sweets we once thought every well-set table boasted. Why, I used to see neighbors vie with each other when entertaining the Ladies' Aid or the Women's Institute. There was quite a bit of rivalry as to which could serve the most inviting food. Now, unless it be in mighty few homes, we believe those days are gone forever. We are eating and enjoying more wholesome foods, doing without sugar or using very little of it. Surely this will mean developing stronger bodies and stronger minds as well.

I trust we can permanently get along with less sugar, while we use our full quota of the more wholesome sweet—honey.

No one dreamed there would be such a wonderful market for honey, ever, but with the sugar shortage, the miracle happened, and how can we keep that market? There is only one way in which this can be done and that is by offering only the finest honey for sale, and being strictly honest about any brand we put on the market.

Skunks Molest Our Bees

Never in our lives have we seen skunks so plentiful as they are this year. We have killed several around the chicken-yard and Boy says they have been at work in his new yard. We had expected bears, instead their worst enemy has been skunks, while in our home yard it was king-birds.

We look for Boy several days this week as he wants to get everything in shape for the coming of cold weather. This week he works the "graveyard" shift, from 12 midnight to 8 in the morning, so he can leave when he comes off shift, then get home in time for sufficient sleep to do him.

A Young Helper

His youngest girl, about three years old, says she is going to be "daddy's helper." She is quite fearless of bees, and when Boy received several queen cages with their royal inmates and their attendant workers, this wee tot found them and was carrying them about, poking her finger against the netting, talking to them, and quite forgetful of anything else about her.

Good Hunting This Season

More than the usual number of deer have been taken outside, some had beautiful heads with wide-branching antlers, that will possibly be kept as trophies of the hunt. Boy's share was a fine buck and two bear cubs. He wounded the mother bear but lost her in the thick brush, but not until she had risen in her wrath —to attack him. That episode, as he tells it, is hair-raising.

Editorials

Seventy Years In The Beekeeping Industry

I have been asked to write a series of articles on this subject, because I am the oldest beekeeping editor living. I hope to begin the series very shortly and when I do I shall attempt to feature the mistakes that have been made down through these years. Perhaps we can learn more from being told what not to do rather than what we should do. On that point not all authorities would agree. A. I. Root made many mistakes before he produced his first barrel of honey from one colony in one season.—E. R. Root.

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Ample Pollen Needed for Populous Colonies

Combs in either single or double brood chambers should contain a considerable amount of pollen late in the fall, the amount depending on the availability or scarcity of pollen in various regions also strength of colonies.

Authorities say there should be the equivalent of four or five combs of pollen for each colony. This amount helps to insure normal brood rearing early in the spring, before pollen from natural sources is available. Assuming there is an adequate amount of honey for each colony, this stored pollen makes possible, under normal weather conditions, very populous colonies to take full advantage of early sources of nectar and pollen. Such colonies are likely to reach the major honey flow in prime condition for storing the maximum crop.

It will be observed that cells in which pollen is stored for future use are about half filled. In many cases honey is placed on top of the pollen. Right here it is important, in estimating the amount of winter stores, to allow for pollen. A brood comb completely sealed over may appear to contain only honey, when, in fact, it may actually have a considerable amount of pollen in the bottoms of the cells.

The foregoing considerations seem to add up to the fact that the two-story brood chamber, consisting of two deep bodies, is none too large to house a populous colony with an adequate amount of honey and pollen for winter and early spring requirements.

We wonder what some of the old timers who, fifty years ago, practiced contracting winter brood chambers down to five or six combs, would think of the present trend towards large brood chambers?

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Cutting Labor Costs

During the years when labor, gas, and rubber were plentiful, there was a tendency to expend altogether too much labor on bees, especially in apiaries located some distance from the home plant. During the past few years, commercial beekeepers have been forced to cut every corner and make every move count for the most. Many beekeepers have been amazed at the relatively small amount of labor actually needed.

Instead of driving an empty truck 40 or 50 miles with one or two helpers to check through an apiary, the trip would be planned in advance and a full load of empty supers taken, even though they were not needed at that time. They can be piled up, mouse proof in the yard.

Some beekeepers have been doing altogether too much tinkering with their bees, performing unnecessary manipulations. After all, bees require only a few essentials which must be provided at the proper time. War conditions may force us to a more simple and sane method of apiary management.

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Beeswax Aids Penicillin's Action in Curing Disease

We are reliably informed that bleached beeswax in peanut oil delays the absorption of penicillin so that it remains in the blood stream seven hours. as compared with three hours when penicillin is given in salt solution. Gonorrhea has been cured with one dose of beeswax-peanut oil mixture containing penicillin. This augurs well to beeswax, an important product of the beekeeping industry.

What Sized Commercial Apiaries? Some years ago when bee pasturage was abundant due to the prevalence of sweet clover in certain regions, there seemed to be a tendency towards large apiaries of from 75 to 100 or even more hives in each yard. In a locality where nectar and pollen plants are plentiful it is difficult during a good season to overstock an apiary Assuming bees would fly two miles in all directions from an apiary, the bees in apiaries placed four miles apart would have access to approximately 10,000 acres of foraging space which would include space occupied by roads, buildings, trees, etc. A 100-colony apiary would have about 100 acres for each colony. That doesn't sound like over-stocking a location. However, there are likely to be apiaries large and small, also colonies in bee trees and buildings within that radius.

Some advantages of large commercial apiaries over small apiaries are less apiary rental because of fewer locations and somewhat less labor and truck mileage. Some advantages of smaller over large apiaries are: less danger of people and animals nearly being stung, because of the smaller volume of bees flying; less danger of starting bees to robbing because of fewer hives in each yard to manipulate; less drifting of bees from one hive to another; and last but not least, the likelihood covering a period of years, of securing a larger per colony average of surplus honey and wax.

Having operated a series of outapiaries for over a quarter of a century we have reached the conclusion that for our region apiaries of 40 to 60 hives each spread at least three to five miles apart, are satisfactory. Some regions will support larger apiaries. Each beekeeper must make his own decision on this matter.

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Is the Food Chamber Needed in the South? In view of the fact that the food chamber is supposed to be a store house of natural stores to carry bees in the northern states over that period of the year when they can get neither honey nor pollen for six months during winter, is such a store house of food needed in the Southland where it is supposed that bees can get a little pollen and honey every week or ten days during winter? This question has been raised several times.

Dr. E. Oertel, of the U. S. Bee Culture Laboratory located at Baton Rouge, Louisiana, has this to say about it:

A study of climatological records here shows that there are many days in the winter and spring when bees are not likely to fly, either because of rain or low temperature. Figures show that colonies must have from 30 to 50 pounds of honey in Louisiana to carry them through the fall, winter, and spring. Nearly every year the State bee inspectors tell us of many colonies needing feed or starving to death. That does not sound as if nectar is so abundant.

Southern beekeepers need a food chamber in some form whether it be a double brood chamber, or a third super. Our observations at Baton Rouge are that colonies here need better beekeeping management in winter and spring than they do in the North. That is, brood-rearing here starts off slowly in January and our major honey flow begins about April 1. According to Farrar brood-rearing starts in January in Wisconsin, but the honey flow does not begin until June 15.

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Village or City Ordinances Against the Keeping of Bees Within the Corporate Limits This year, especially, there have been more complaints about bees stinging neighbors and their children in cities and towns than formerly. In most localities the weather has been either chilly and cold or rainy and the bees have not been able to gather honey as formerly, with the result that they have not been on their usual good behavior.

Two such cases have occurred in Akron, Ohio, the rubber city of this country if not of the world. Of course, Gleanings could not tolerate a city ordinance within 20 miles of its office. "E. R." took it upon himself to hunt up the complainants immediately, as well as the City Fathers. He induced the beekeeper to move his bees out of town, and then explained to the councilmen that the U. S. Department of Agriculture urged that bees be kept in cities and towns to increase both the fruit and the Victory garden crops. After a half-hour talk with the city dads he convinced them that an ordinance would not only be unconstitutional but would cut down their fruit crop when it was so necessary during these war times. On account of its many hills, Akron has many little fruit groves.

It appears that the beekeeper in

Akron, against whom complaint was made, had been keeping Caucasians, and as long as he had that strain of bees there was no trouble. He let them run out and they developed into hybrid Italians and it was then that the neighbors began to complain. The beekeeper moved his bees with the result that the city fathers instead of passing this ordinance, wanted to know if they couldn't keep bees also, and inquired as to the strain. Of course, we recommended Caucasians.

Perhaps the time may come when city dwellers will adopt this strain of bees in place of the regular Italians, especially Italian hybrids. One must remember that the strain of Caucasians raised on the plains are not gentle but those raised in the mountains where there are no enemies are gentle and easy to handle. They will sting but not if handled properly. We attended a meeting in Cuyahoga County and several said they were using Caucasians and had had no trouble whatsoever.

As we said in a recent issue, we are not here advocating Caucasians on all occasions, but in cities and towns where lot lines are not more than 50 feet wide, Caucasians would seem to be the strain that should be adopted, and a pure mountain strain at that and not a mixture of Italians and Caucasians.

Remember, Caucasians are not as pretty as Italians with their yellow bands and are bad propolizers, but they are easy to handle, even without smoke, by using a little caution.

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Let's Boost Our National Federation There is no denying the fact that the beekeeping industry in this country during recent years has been somewhat loosely organized and unwieldy. It needs to be organized more efficiently in order to harness the latent powers of leaders within our ranks, so that worthy objectives may be set up and achieved for the betterment of beekeeping everywhere. With this in mind the **National Federation of State Beekeepers' Association** was formed last January at the National Beekeeping Conference in Chicago, with Oscar Schmidt, Bay City, Michigan, President; D. C. Stahlman, Buhl, Idaho, Vice-president, and V. G. Milum, Champaign, Illinois, Secretary-treasurer.

The Board of Directors, consisting of one delegate from each affiliated state organization determines the policies of the Federation and chooses officers at the annual meeting. In late September, 24 states were affiliated with a total membership of 4122. More states have doubtless come in since then. In view of the coming National meeting in January (see page 553) each affiliated association should select its delegate to the Board of Directors for the coming meeting. An alternate should be chosen, in case the regular delegate cannot attend.

The various committees, nine in all, mentioned on page 446 of October, 1944, Gleanings, have been active and will report at the coming meeting.

It is one thing to get a National Federation started and it is another thing to keep it going. The officers are working faithfully. Dr. Milum, with all his regular duties is doing a fine job as Secretary-treasurer. We solicit the interest and loyalty of every beekeeper in behalf of our National Federation. Those interested in more detailed information regarding the Federation set-up should write V. G. Milum, 104 Vivarium Bldg., Champaign, Illinois, for copies of news letters which have already been sent out.

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Don't Get Alarmed About DDT We receive quite a number of letters from beekeepers over the country who are disturbed about the possible danger of bees being destroyed by the use of DDT, the recently developed chemical of extremely high potency.

We have it on good authority that DDT, if and when it becomes available in quantity, will be used judiciously with respect to insects that are beneficial to agriculture, because of pollination services performed. We hope to have more on this in the near future.

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Beekeeping is Different As brought out in the article by C. W. Carroll on page 515 of this issue, "Why I Keep Bees," beekeeping is actually different from any other branch of agriculture. Other animals on the farm have to be attended to and fed regularly, whereas honeybees, if given a chance, will gather their own food

(Continued on page 564)

American Honey Institute News Notes

Mrs. Harriet M. Grace, Director

"When peace on earth doth stay,
'Tis angels ring the bells—
the peasant people say."

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Let us aim to have a honey section in every store in America. Keep this section filled with various size containers of honey. A light might be thrown on the honey. Honey should also be placed with related items, such as bread, milk, cereals, and fruit. Keep honey on the meat counter also.

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Sno Sheen Cake Flour packages carry the recipe for Regal Honey Icing.

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Two important pieces of research in which honey is included are being carried on at the present time. Research workers are few these days but when more are available, additional research on honey will be carried on.

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The monthly news bulletin to members in November included a copy of a talk given by Mr. D. E. Kinder, a chemist, at the Southern States Conference.

One idea received from reading the monthly news bulletin of the **Institute** may be worth far more to the beekeeper than his entire investment in the **Institute.** If you are not a member invest in the **Institute's** services today.

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The annual directory of the **American Honey Institute** will be printed early in January. Each member will receive a copy.

Letters from England ask whether their beekeepers may become members of **American Honey Institute.**

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Honey glazed onions have been featured in colorful advertising during the past month.

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On December 13, the Director has a broadcast on "Holiday Sweets."

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A State Health Department writes: "I am grateful for the literature you sent. It is very useful since it is distributed among our various clinics."

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Extract from a letter of a dietitian: "I have been taking dietetics and expect to complete the course in the near future. Also working in health food stores and other places I have learned the value of honey in the diet in place of sugar. Then my father was a physician and dietitian and we as children were taught never at any time to use refined sugar. I can assure you that any information you can send for using honey in cooking will be greatly appreciated."

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One news syndicate gave 24 inches of space to an article with recipes on honey during the second week in November.

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The Institute is preparing for the annual "Honey for Breakfast Week" that begins Easter Sunday morning each year. More than a month ago the **Institute** notified magazines of this event. This gives one an idea how far in advance this work must be done.

The winter of 1942 in the apiary of Thomas Johnstone, of Vancouver, B. C., Canada.

Asked and Answered

Demareeing—What Does It Mean?

Question.—There is a word that I often see used in bee literature, which I cannot find in the dictionary. The word is Demareeing. Just what does it mean?—Lloyd A. Heinz, Oregon.

Answer.—It is true that the word, "Demareeing," in bee literature is not so well understood. As you may surmise, the word originates from the name of the man who developed this system of swarm control many years ago, Mr. Demaree of Kentucky. In a word, it consists of raising most of the combs of brood out of the brood chamber into a super above a queen excluder, leaving one comb of brood with the queen below and filling in the empty space in the brood chamber with either drawn combs or full sheets of foundation. This, as you will see, separates the queen from most of the brood and relieves congestion in the brood chamber. This is practiced usually when queen cells are found and a colony is likely to swarm. Of course, the queen cells should be destroyed at the time the brood is raised above, also about nine days after Demareeing.

Tartaric Acid in Sugar Syrup

Question.—How can I keep sugar syrup fed to bees from granulating in the comb?—Ira T. Burns, Texas.

Answer.—To retard or prevent sugar syrup from granulating after it is stored in the combs by bees, tartaric acid should be added to the syrup when it is being made. About ¾ of an ounce of tartaric acid to each 25 pounds of sugar is sufficient. The tartaric acid should be put in the syrup while it is being stirred and while it is hot.

Do Bees Work Red Clover?

Question.—Is there an Italian bee that will work on red clover to any extent? Will the Caucasian bees work red clover?—John M. Kubis, New York

Answer.—Italian bees do work red clover bloom to some extent, especially during dry seasons when the corolla tubes are shorter than normal and especially the tubes on the outer edges of the clover heads. Caucasian bees are said to have slightly longer tongues than the Italians. The length of a honeybee's tongue is approximately 18/100". The length of a corolla tube of red clover is approximately ¼", or, 25/100". Years ago, we had a colony of bees with tongues 22/100". We attempted to propagate that strain but these long tongued qualities were lost in succeeding generations. It has been proven that Italian bees do pollinate red clover bloom to quite an extent, especially when other sources of nectar are not too plentiful. The bees attempt to reach the nectar at the bottoms of the tubes and thus bring about cross pollination by distributing the pollen from one blossom to another.

What to do with Granulated Combs

Question.—We extracted our honey a few days ago, and could get only about one half of it out of the combs because it had granulated. If I save these combs and put them on the hives next summer, will the bees liquefy this honey so it can be extracted, or what should I do? I hate to melt the combs to get the honey.—Clyde Heston. Ohio.

Answer.—It is apparent from your letter that combs of honey you attempted to extract recently were granulated to such an extent that only the liquid honey could be thrown out. If you will save these combs containing granulated honey until next spring and put them in strong colonies, after settled warm weather comes, the bees will utilize this honey. The warm weather, together with the heat of the hive, will gradually reduce the honey to liquid form. Of course, the bees may remove some of the granules and drop them on the bottom boards of the hives. The fall flow came so late that it was almost impossible to get it extracted before granulation set in.

Uncapped Fall Honey in Brood Chambers

Question.—When I examined my colonies last week I found most of the honey uncapped. We have had several hard frosts and to my observation all honey-producing flowers are gone. I am writing this to inquire if the bees will cure and cap the honey yet this fall and whether the uncapped combs will provide suitable food for the winter.—J. H. Weaver, Ohio.

Answer.—It would seem that your bees must have gathered a considerable amount of late fall honey, perhaps from common aster which is quite abundant in some areas. This honey, if properly ripened by the bees, is suitable for winter stores. At the end of a flow it is impossible for bees to completely cap all of the honey in the combs. As a matter of fact, some of the honey is needed for daily consumption and therefore does not need to be capped over completely. In many instances, honey

that is not completely capped over is ripened and by that we mean that the bees have driven off the excess moisture content from the nectar and reduced it down to the consistency of honey. Once in awhile, a late aster honey flow is followed by cold weather which does not permit the bees to ripen the honey in the brood chambers properly. When this happens there is likely to be poor wintering, especially when bees are kept in their hives during long protracted cold spells of winter. This fall, however, has been quite favorable for bees to ripen the honey, and we hardly think it will cause trouble.

Finding Old Queen Before Requeening

Question.—I have three hives of bees in good condition. I recently purchased three new queens and found and destroyed the old queen in two of the hives. However, in the third hive—a double body hive, I just could not locate her although there is evidence that a queen is there. On three different days I tried to find her but with no success. Not wanting to keep the new queen so long in the shipping cage I put the cage on top of the frames and closed the hive. Now I am wondering just what will happen and which queen will survive.—Harvey DeCamp, Calif.

Answer.—To find an old queen in a populous two-story brood chamber hive, you should try the following procedure: Smoke the entrance of the hive in order to drive the queen into the upper chamber, if possible. Set the upper chamber off onto another bottom board, supply the hive with a cover and leave the hive closed for a day. The old bees will, of course, return to the parent hive. During the middle of a warm day when a large percentage of the bees are in the field, it should then be comparatively easy to locate the old queen, provided she is in the chamber you set off. After the old queen is found and removed you can then set this hive back on the parent stand. It is possible that the queen you introduced to the colony from which you did not remove the old queen may survive. However, the chances appear to be in favor of the old queen remaining in the hive and the new queen being killed.

Windbreaks and Bottom Packing

Question.—How close to the windbreak can I set my hives? In wrapping the hives should I put anything under them?— A. J. Schubert, Missouri.

Answer.—Hives of bees should be set reasonably close to a windbreak. Any objects on the side of the apiary from which prevailing winter winds come that will break the force of the winds will answer this purpose. For example, an artificial windbreak, such as a fence, should be built or constructed like the snow fences seen frequently along railroad tracks. The fence instead of being solid should be slatted in order to break the force of the wind. The bottoms of the hives should have some protection, as well as the sides and tops.

Dividing Strong Colonies

Question.—Can I divide two-story colonies into two parts next season, and place a queen with the queenless section of each? —Mrs. Clarence B. Reed, Pa.

Answer.—It is possible to divide your two-story populous colonies about June 1, giving each queenless division a queen. If there is little nectar coming in at the time you divide it would certainly pay to feed the bees sugar syrup until abundant nectar is available. This will help to insure satisfactory acceptance of the queens that are introduced. It would be well to permit the bees to release queens by eating the candy out of the holes in the ends of the cages.

Fixing Rusty Spots Inside an Extractor

Question.—I have an extractor which is starting to rust inside. Is there a remedy for this which will not contaminate the honey?—Edward McConnell, Wisconsin.

Answer.—You should sandpaper the rusty spots on the inside of your honey extractor, then apply aluminum paint. After the paint has dried thoroughly it will not contaminate the honey.

Is the Buckeye Tree Poisonous to Bees?

Question.—There is a buckeye growing in the foothills of California which poisons the bee brood and later seems to poison grown bees. One beekeeper from Nevada City, Placer County, who ranges his bees well above the altitude where the buckeye thrives, told me that it is not poisonous until the blossoms begin to turn brown. Up to that time it seems to have no injurious effect upon them. You have much buckeye in Ohio and I would like to know if it is also poisonous.—Prof. Vincent P. Gianella, Nevada.

Answer.—The buckeye tree grows well in this state. As you know, residents of Ohio are called "Buckeyes." While the nectar from this blossom may be poisonous in Nevada, I don't think I have ever heard of poisoning from this tree here. In fact, we do not regard this tree either as a pollen or a honey plant for bees. I have never seen nor heard of buckeye honey, although it is quite possible that in your country the bees may gather nectar from it.

XUM

Just News

The New Rochelle Beekeepers' Association will hold a joint Christmas Party and meeting on Sunday, December 17, at 2:30 P.M., at the home of Mr. and Mrs. S. Barnes, 325 Webster Ave., New Rochelle, N. Y. Guest speaker for this occasion will be Dr. E. F. Phillips from the N. Y. State College of Agriculture at Cornell University, Department of Entomology. He will talk on division of labor among the bees of the colony in the house work and in the field. Santa Claus will be on hand to greet the children. Any nonmember beekeepers interested in bee culture from Westchester County and vicinity are extended a most cordial invitation.—Agnes Barnes, Asst. Sec.

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Important State-wide Meeting of Beekeepers in Nashville, on December 8. Business of utmost importance to the interest of the beekeeping industry will be discussed at an all-day meeting at the James Robertson Hotel in Nashville on Friday, December 8, starting at 9:30 a. m. State Apiarist George H. Rea is anxious to have this a truly representative meeting. Officers and members of the Tennessee Beekeepers' Association, sectional and local beekeepers' organizations, and all independent commercial beekeepers are especially urged to attend. Success or failure of commercial beekeeping in the State may well depend upon the decisions made and action taken at this meeting. Convention rates at the James Robertson Hotel are $2.00 and $2.50 per day when two persons occupy one room or suite, but reservations must be made on or before December 1st.—A. N. Pratt, Head Division of Horticulture and Apiaries.

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The Middlesex County Beekeepers' Association will meet on Saturday, December 30, at 7 P. M., at 19 Everett St., Concord, Mass. The Ladies' Auxilliary is planning a baked bean supper with brown bread frankforts, pickles, comb honey, and coffee. Following the discussion of beekeeping problems, Mr. Harold R. Stevens, of Weston, will show moving pictures. A. M. Southwick, Pres.

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Vincent Molino, editor of "Revista de Apicultura," official organ of Argentina Beekeepers' Association, published in Buenos Aires, passed on June 27, 1944.

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The Twenty-third Annual Short Course in Beekeeping will be held at the University of Manitoba, Winnipeg, January 15 and 16. The course will include lectures and demonstrations on beekeeping. The tuition is $5.00.

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The Ontario Beekeepers' Association will hold its 1944 convention on December 5 to 7 in the Tudor Room, York Hotel, Toronto. A well balanced program is being arranged, which will include Mrs. Harriett M. Grace of the American Honey Institute, and C. L. Farrar, of Madison, Wisconsin.

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The Bronx County Beekeepers' Association will hold its regular monthly meeting on Sunday, December 10, at 2 P. M., at the home of the Secretary, 3016 Bronx Park, East Bronx. Guest speaker will be Dr. E. J. Dyce, of Cornell Agricultural College, New York. We extend a warm welcome to all.—Harry Newman, Secretary.

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The Annual winter meeting of the Empire State Honey Producers' Association will be held on December 8 and 9, 1944, at the Onondaga Hotel in Syracuse, N. Y.

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"How Science Made a Better Bee," an interesting four-page article colorfully illustrated, appearing in the September, 1944, **Popular Science** will create more interest in honeybees, especially the pollinating service they perform.

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Honey Production in Canada for 1944 is 36,215,800 pounds, as compared with 39,492,100 pounds in 1943. The average production per colony is 68 pounds in 1944, and 78 pounds in 1943. The province with the highest per colony average for 1944 is Alberta with 105 pounds and for 1943, Saskatchewan with 99 pounds.

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Mr. Chas. Mack, of Sharpes, Fla., a beloved and well known deputy state bee inspector, was killed on

the highway near his home on November 5. Lynn M. Dewey, in a letter to us reporting his death, writes: "Many a year will pass before he is forgotten. All of us will have to pass on before the memory of our good friend Charlie Mack will fade. We hope there are bees in Heaven and that St. Peter needs a good beekeeper, as we can not think of Charlie, even in Heaven, not being among the bees."

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The 26th Annual Meeting of the Alabama Beekeepers' Association was held in Montgomery, Alabama, at the Jefferson Davis Hotel on October 20, 1944. Most of the queen and package producers of Alabama were present. Several visitors from our neighboring state of Mississippi were present also. Shippers reported that the 1944 season was good, with the demand for queens and packages greater than the supply. Some of the shippers reported greater losses of bees in transit than usual. This, no doubt, was due to the fact that carriers under the congested conditions were not able to give the bees as much attention as they usually do. In talking with producers, it was learned that the production of queens and packages in 1945 will be cut some due to a shortage of labor. The indications were that queens and packages would be a little higher next year. New officers elected for 1945 were as follows: Eugene Cutts, President, Citronelle, Alabama; Dan Smith, Vice-president, Calvert, Alabama; Prof. F. E. Guyton, Secretary-treasurer, Auburn, Alabama. Board of Directors: J. F. McVay, Jackson, Alabama; W. E. Harrell, Hayneville, Alabama; Zed Gafford, Bolling, Alabama.

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Cpl. Nels Jensen, son of Mr. and Mrs. N. C. Jensen, Macon, Mississippi, owners of Jensen's Apiaries, was killed in action on October 20. Cpl. Jensen, whose wife lives in Louisville, was a radio operator on a transport plane in the Asiatic area. Our sincere sympathies to the bereaved families.

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The Wyoming beekeepers held a successful convention at Casper on October 26 to 28. Dr. A. P. Sturtevant of the Intermountain States Bee Culture Laboratories at Laramie, was one of the speakers. Officers for 1945 are: Herman Rauchfuss, of Worland, President; Sterling Johnson, of Lovell, Vice-president; Herbert B. Addleman, of Douglass, Secretary-treasurer.

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The Illinois State Beekeepers' Association held a very successful meeting in Springfield on Nov. 10 and 11. An average of 75 were in attendance at most of the sessions, the ladies holding a meeting of their own. Over a hundred attended the banquet on Friday evening.

One of the features of the program was the showing of the beautiful motion pictuses in color by H. J. Rahmlow explaining how the Central States Bee Culture Laboratory manages bees the year around. Mr. Rahmlow also spoke on "New Ideas of Colony Management" featuring the trapping of pollen from three-story brood chamber colonies. The trapped pollen is mixed with soybean flour and fed for making up deficiencies in natural pollen thereby insuring plenty of young bees early in the spring.

The new officers of the State Association are: Ellsworth Meineke, President; Foster Hanneford, Chester Jones, L. R. Robbins, R. Grober, Harley Walker, Regional vice presidents; Hoyt Taylor, secretary; Wesley Osborne, treasurer.

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National Meetings: A committee headed by V. G. Milum, Secretary-Treasurer of the National Federation of the State Beekeepers' Association, is completing arrangements for the annual meeting of this and allied organizations including the American Honey Institute, the National Honey Association, the Bees Industries Association, and Apiary Inspectors of America. Tentative dates selected are January 14 to 16 depending upon the securing of satisfactory hotel accommodations. The convention city has not been definitely selected but will be announced in the January issue along with the complete program of the convention. The latest information is that convention headquarters will be the Morrison Hotel in Chicago. As soon as available, complete details will be mailed to all officials of state organizations on the Federation mailing list and to all who received the Federation News Letter No. 2. Those wishing advance information as to exact location, dates, and ho-

(Continued on page 564)

Talks to Beekeepers

By M. J. Deyell

Some Observations of the Past Season

After the rush and bustle of a busy season is over, one usually has time to look back and review the activities of the past season to determine if possible where and why some mistakes were made, with the view of avoiding their recurrence in the future, also to note new developments, especially shortcuts in apiary management, as well as observations regarding bee behavior.

During these days of labor shortage, most of us are so driven with duties to be performed each day that we may fail to observe or take in some of the interesting developments that are perhaps occurring right under our noses each day.

Some of the old bee masters like Doolittle, Dr. Miller, Crane, Hutchinson, and others we might mention, actually lived with their bees, also made and recorded observations on bee behavior, thus making a valuable contribution to the beekeeping industry.

(1) **Importance of Strong Colonies at the Proper Time.** This has been driven home to me quite often but somehow it is overlooked in some instances each season. When I see a number of colonies with supers piled rather high and other colonies with very few supers I always say, "What a whale of a crop we would secure if every colony were as good as the best."

Now, of course, I realize that having very populous colonies does not necessarily insure the securing of a maximum crop. Right here, the quality or strain of bees enters the picture. That, in my opinion, is one of the most difficult problems that faces beekeepers today—maintaining a really good strain of bees superior in honey gathering qualities. Considerable progress can be made along this line by breeding from the best queens and this brings us up to the next observation.

(2) **Maintaining Nuclei for Rearing Queens.** I made reference to this in an article entitled, "Simple Method of Rearing Queens and Requeening," found on pages 12 and 13 of the January, 1944, Gleanings. Since that article was written we have had further experiences along this line. I find that a number of beekeepers over the country are maintaining nuclei in or near their apiaries.

In starting these nuclei which is done during the height of the season, we aim to secure cells from our very best producing colonies. There is likely to be an abundance of desirable drones on hand at that time of the year to help insure satisfactory matings.

In the June, 1944, Gleanings, page 263, I referred to wintering queens in nuclei. At the present time we have in the neighborhood of 75 queens in five-frame nuclei, two nuclei in a 10-frame standard hive ready for winter. We hope to winter these in our bee cellar which, by the way, has not been in use for a number of years. Just how these nuclei will winter remains to be found out. At any rate, they are strong in bees and have an abundance of stores. We will put them in our bee cellar late in November (this is November 10) following a good cleansing flight.

We hope to keep tab on these queens during the coming season to see how they compare with other queens. It will be handy to have some queens on hand early in the spring in case some are needed, especially if it is difficult to get queens from the South.

(3) Importance of an Abundance of Stores for Each Colony. Some

years ago, we used the shallow food chamber. We now use the deep food chamber almost exclusively. Occasionally in the spring, about fruit bloom time, we wonder if the bees will use all of the honey in the food chamber. This condition was especially evident in one of our apiaries last spring. We were on the point of removing some of the honey but I told the boys to leave it in the hives to see what would happen by the end of the season. At this particular yard we shook the colonies for packages to be shipped during June. Some of you may not know that we devote some of our apiaries around Medina to producing package bees, mainly for beginners.

Referring back to the colonies with such an abundance of stores, these same colonies later on had consumed practically all of the honey but they were very populous, ready for the fall flow. Some colonies that did not have an abundance of honey had to be fed during August and that brings us to the next observation.

(4) **Feeding Sugar Syrup.** During the past season, in late August following a prolonged dry spell, we fed sugar syrup to a few colonies that were short on stores. Rather than give the colonies a small amount of thin syrup we fed each colony about ten pounds of thick syrup, two parts sugar to one part water. At the time we fed the syrup the bees were collecting a considerable amount of pollen. The colonies fed sugar syrup increased the amount of brood they had and built up rapidly to take advantage of the fall flow. It seems that feeding sugar syrup during a dearth of nectar does actually stimulate brood rearing when ample pollen is available. If pollen is scarce sugar syrup supplies stores but may not result in any great increase of brood rearing.

(5) **Shaking Bees from Populous Colonies.** During a normal season when ample nectar is available we can shake five or six pounds of bees from strong colonies during June and early July and permit the colonies to build up to normal strength in time to store surplus honey from the fall flow that comes late in August and September. There is something rather peculiar about this business of shaking packages of bees from strong colonies. In most cases the harder you shake the colonies the faster the queens lay and it is remarkable how quickly such colonies will come back to normal during a season when the honey flow is good. You fellows in the South who supply package bees will understand what I am driving at. I may have something more to say on this subject in the future.

(6) **It Pays to be Near Sources of Pollen.** Recognizing the importance and necessity of an ample amount of pollen during the season to encourage normal brood rearing in the production of populous colonies, we aim to have our apiaries located near rivers or creeks and preferably in a wooded area where pollen from trees and shrubs is plentiful. Maples and elms give colonies a good start in brood rearing early in the spring. Pussy willow usually grows along creeks.

We have observed that some apiaries in a somewhat restricted region

Part of the experimental apiary of The A. I. Root Company at Medina, Ohio.

collect more pollen than other apiaries in the same general region. This may throw some light on the next observation.

(7) **Differences in Locations.** We have been puzzled more than once, and perhaps some of you readers have, regarding the differences in yields of honey in apiaries not more than eight or ten miles apart. The colonies in all yards may have been apparently of equal strength and the management almost identical.

One possible reason for the higher yields of honey in certain apiaries is the greater amount of pollen available to the bees. When driving through a region and observing the vegetation casually, one might not see any difference between the apiary locations. However, a more thorough examination of the pollen sources may actually show that the apiaries giving the higher yields of honey also collect more pollen than apiaries where the yield is lower.

Different types of soil may also be responsible for differences in nectar secretion. We have a great deal to learn along this line. Pollen collected from plants growing on certain types of soil may be more potent for brood rearing than pollen collected from plants on different types of soil.

(8) **Making Every Move Count for the Most.** In operating our outapiaries this past season we have been very short of help. Just how we got through the season as well as we did is more than I can understand. Yours truly had to leave his desk many times each week to help out here and there. I learned more about the tricks of the trade than if I had remained at my desk.

It is really amazing what can be accomplished in getting things done if we will just sit down calmly, long enough to decide what actually has to be done and then plan to do it.

Sometimes valuable time is lost because someone in the crew, upon arriving at an out-apiary discovers that he has forgotten his veil or smoker. Before starting to an outapiary, I insist that one of the boys call off all of the items needed and another boy check to see that the items are in the truck.

We aim to run our trucks to capacity whenever possible, either going or coming from apiaries so there is no back tracking.

(9) **Intensive Rather than Extensive Beekeeping.** I have come to the conclusion that it would pay beekeepers to operate fewer hives of bees and more real colonies of bees. We have found that one real colony of bees will sometimes produce more surplus honey than three or four colonies of mediocre strength. If we concentrated our efforts on managing as many real colonies of bees as we can, efficiently, and fewer hives with less bees in them, in the end we will be better off.

A nice backlot apiary owned by W. E. Grossman, of Cincinnati, Ohio.

SIFTINGS–from various sources

By the Editors

"Books still accomplish miracles; they persuade men."—Carlyle.

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"The grand essentials for successful wintering bees in the open air in cold climates may be condensed into a very few words: plenty of bees; plenty of food; easy communications among the combs; upward ventilation for the escape of dampness; and the hive entrances well sheltered from piercing winds."—From "Langstroth on the Hive and the Honeybee."

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"Beekeeping originated with a Neolithic race in or near India, and spread thence to Europe and North Africa and to the furthest north and west of Europe."—Miss Annie D. Betts, in June, 1922, "Bee World."

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Chilled Bees: "In the month of March Capt. Baldenstein gathered from the snow a large number of chilled bees. He laid them on the alighting boards of one of his hives in the evening. Next morning at 10 o'clock they still lay there without any sign of life. But after the sun shone on them a while the greater part of them revived and flew to their respective hives. They had rmained in a benumbed state sixteen hours without being really killed."—February, 1861, issue of American Bee Journal.

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Moses Quinby, in his book, "Mysteries of Beekeeping Explained," in 1866, has this to say on wintering of bees: "There is almost as much irreconcilable diversity of opinion with respect to wintering bees as in the construction of hives." (There still seems to be some diversity of opinion.—M.J.D.

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Young Bees and What They Do: According to Dr. Rosch of Germany the main duties of young bees are:

"(1) From the first to the third day they prepare the empty cells for brood and assist in incubating it by maintaining necessary temperature;

"(2) From third to sixth day they feed the older larvae with pollen and honey;

"(3) From sixth to tenth, or 15th day, they feed the younger larvae with larval food—now generally considered to be a special secretion of the pharyngeal glands which are in a state of activity in bees of this age;

"(4) From 16th to 20th day they are engaged in various domestic duties, including receiving and ripening of honey and secretion of wax."

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"Only the strongest colonies that produce the best results should produce the drones for the whole apiary."—Anonymous.

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"I have known bees to gather honey from the tulip tree on very clear moonlight nights."—L. L. Langstroth in "The Hive and the Honeybee."

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"The weight of the queen bee varies according to whether she is laying heavily or not. During the winter when she is not laying at all, she would, of course, weigh the least. Ordinarily, she weighs about .25 of a gram or about three and one half grains. A good queen is capable of laying 3000 eggs in 24 hours but she does this only during a short period in the spring. The eggs when first laid weigh about .00013 of a gram but weigh less when about ready to hatch. It would therefore require about 500 of these to weigh one grain, or 240,000 to weigh an ounce."—Geo. S. Demuth, in June, 1922, Gleanings in Bee Culture.

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Resistancy to American Foulbrood: "Brood from resistant and non-resistant colonies was equally susceptible to American foulbrood when reared in badly diseased colonies. This fact suggests that colony resistance depends on behavior factors rather than on physiological resistance in the larvae." A. W. Woodrow, U. S. Dept. of Agriculture, Bureau of Entomology and Plant Quarantine, in his article "Susceptibility of Honeybee Larvae to American Foulbrood," in March, 1941 Gleanings in Bee Culture.

Buy and Sell Here

CLASSIFIED ADS

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate: 8 cts. per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in by the 10th of the month preceding.

HONEY FOR SALE

FOR SALE—Quality buckwheat, liquefied. Howard Grimble, Holcomb, N. Y.

BLUE-VINE HONEY in 60-200 cans. H. A. Ross, Poseyville, Ind., R. 1.

FOR SALE—Extracted honey, 5-lb. glass. A. H. Harris, Jackson, Tenn., Route 5.

FOR SALE—Good buckwheat honey in 60 lb. cans at ceiling prices. Julius Seewaldt, Johnsonburg, N. Y.

FOR SALE—Five tons pure buckwheat honey in sixties at 15c per pound, at Bedford Hills, W. S. Gibson, Bedford Hills, N. Y.

MICHIGAN'S FINEST WHITE CLOVER HONEY in glass Write for prices. You will be pleased. John McColl, Tecumseh, Michigan.

HONEY FOR SALE—We buy and sell all kinds, any quantity. H. & S. Honey & Wax Co., Inc., 265-267 Greenwich, St., New York.

FOR SALE—Buckwheat and fall honey in 60-lb. tin cans. Any quantity from can to carload lots. Cloverdale Honey Co-op., Inc., 113 Central Ave., Fredonia, N. Y.

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

FOR SALE—50 60-lb. tin amber clover, $12.00 can; 50 60-lb. tin California eucalyptus, $12.00 can; 50 60-lb. tin California avocado. $12.00 can; 50 60-lb. tin amber goldenrod, $10.80 can; 100 60-lb. tin dark Cuban, special, $10.00 can. Natural Foods Institute, 624 Prospect Avenue, Cleveland, Ohio.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE—We cannot guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on C. O. D. terms except where the buyer has thoroughly established his credit with the seller.

WANTED—Aster honey. Send sample. Robert W. Lane, Greeneville, Tenn.

WE PAY CASH for extracted clover honey. Fairfield Honey Company, Millersport, Ohio

WANTED—White and amber honey; any amount. D. F. Treap, 317 Keenan Ave., Cuyahoga Falls, Ohio.

HONEY WANTED—All Grades and Varieties Highest Cash Prices Paid. Mail Samples. State quantity. HAMILTON & COMPANY, 1360 Produce Street, Los Angeles, Calif.

HONEY AND BEESWAX—Highest prices paid. Mail samples. Advise quantity. BRYANT AND COOKINHAM, LOS ANGELES, CALIF.

TOP CASH ceiling price paid for your extracted honey, any amount. Honeymoon Products Co., 39 East Henry St., River Rouge 18, Mich.

BEESWAX — Highest cash prices paid. Send sample and advise quantity available. MUENCH-KREUZER CANDLE CO., INC., Syracuse 1, N. Y.

HIGHEST cash return made the day we receive your beeswax. Write for shipping tags and quotations. Walter T. Kelley Co., Paducah, Kentucky.

CASH FOR YOUR HONEY—Extracted or comb. Regular trade, send sample. 60-pound cans furnished, if desired. W. R. Moomaw, Stone Creek, Ohio.

WANTED—All grades of comb and extracted honey Bee supplies and honey containers for sale. Prairie View Honey Co., 12243 12th St., Detroit, Mich.

CLOVER HONEY WANTED—Top prices for extracted section, and shallow frame comb. Truckloads or carloads. Tell us if you can deliver. KEDASH BROTHERS, Chillicothe, Ohio.

CLOVER HONEY WANTED — Large or small lots. Would like to establish permanent connections with several good producers. Ellsworth A. Meineke, R. 1, Arlington Heights, Ill.

HONEY WANTED—300,000 lbs. of honey was packed by us last year. We need that much for this year also. A postcard will bring our truck. We pay cash ceiling prices plus tin. If you wish to pack some of your honey for local trade we can bring along the glass or tin you need. You'll do better with the ALEXANDER CO. than with a distant corporation. Send your card today to the ALEXANDER CO., 819 Reynolds Rd., Toledo 7, Ohio.

FOR SALE

MY FAVORITE BEE VEIL. Write for description and price. G. M. Ranum, Mount Horeb, Wisconsin.

QUEENBEE PAINTING outfits $1.00, colony records 10-15c postpaid. Southwick Apiaries, Waban, Massachusetts.

FOR SALE—100 shallow extracting supers with drawn combs, disease free, at $1.00 each. T. L. Rittenhouse, Elmore, Minn.

COMB FOUNDATION at money-saving prices. Wax worked at lowest rates. Comb and cappings rendered. Robinson's Wax Works, Mayville, N. Y.

FOR SALE—Shallow frames 2c each, beeway holders, 3c each. Wanted to buy factory made used 10 frame empty hives. John Sueper, Webster City, Iowa.

TRAP FOX AND COYOTE on bare ground or deep snow. Learn modern tricks to outwit the sly furbearers. Free illustrated circular. Q. Bunch. Welsh, Minnesota.

WRITE FOR CATALOG. Quality bee supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

FOR SALE—500 Jumbo supers with 8 combs each, in good condition, all Three-ply foundation; several hundred 5¾ supers and combs; everything 16¼ x 20. John N. DeMuth & Son, Corfu, N. Y.

SAVE MONEY by letting us work your wax into wired regular comb foundation. Large catalog describes everything. You pay only wholesale factory prices as we have no agents. Walter T. Kelley Co., Paducah, Kentucky

FOR SALE—Several hundred 8- frame comb honey supers for 4-1/4x1-½" plain sections in very good condition, steam uncapping knife, and 2-gallon copper boiler complete, almost new. L. A. Otto, Forest Jct., Wisconsin

SEEDS OF HONEY PLANTS — Anise, Hyssop, Birdsfoot Trefoil, Cleome serrulata and others, six packet collection, $1.00, fifteen packets, $2.00, postpaid. Also quantity prices. Send for circular. Pellett Gardens, Atlantic, Iowa.

OFFER at reasonable prices, quantity beekeeping equipment. Honey tank, supers, excluders, bodies, etc., eight and ten frame. Thirteen 8 frame hives complete. Dovetailed, metal covers, with new excluders, $25. Eight frame supers like new. Earle Heiges, Shiremanstown, Pa.

HEATER OF THE BEES—For complete, authentic, reliable engineering data compiled in conjunction with the American Society of Heating and Ventilating Engineers, and pertaining to the new Optimum Hive with thermostat controlled electric heaters and fans, write D F. McFarland, Research Engineer, Solon, Maine.

BEES AND QUEENS FOR SALE

GLEANINGS cannot guarantee that all bees advertised for sale in our classified columns are free from bee disease. We use all possible care in accepting advertisements but we cannot be held responsible in case disease appears among bees sold. We suggest that prospective buyers ask for certificate of inspection as a matter of precaution.

PACKAGE BEES for 1945. Now booking orders. Crenshaw County Apiaries, Rutledge, Alabama.

NORTHERN-BRED Queens. Hardy honey producing Italians, $1.00 each. Shirl Baker, Rodney, Michigan.

CAUCASIAN package bees for 1945. Booking orders. Write for price to Lewis & Tillery Bee Co., Greenville, Ala.

QUEENS QUEENS — We ship young laying queens in November. Italians, $1.00 each. White Pine Bee Farms, Rockton, Pa.

THREE - BANDED ITALIAN bees and queens for 1945. Booking orders now. Alamance Bee Co., Geo. E. Curtis, Mgr., Graham, No. Car.

WANTED--Extracted Honey All Varieties
One can or a carload—what have you? Mail your offerings and samples to us. Prompt action—Cash on delivery.
JEWETT & SHERMAN COMPANY
Lisbon Rd. & Evins Ave, Cleveland 4, O.
1204 W. 12th St. Kansas City 7, Mo.

HONEY WANTED

Carloads and less. All grades. Pay cash. Can furnish containers.

J. W. REITZ & BROS.
Summerfield, Florida

HONEY WANTED

Carloads and less than carloads. Mail sample and best prices in all grades.

C. W. AEPPLER COMPANY
Oconomowoc, Wisconsin

CHOICE ITALIAN QUEENS and package bees.
We have been furnishing queens and package bees through other shippers. Let us furnish yours direct.
Write for prices.
CLIFTON APIARIES
P.O.Box 684 Oroville, Calif.

1945 PRICES
ITALIAN BEES AND QUEENS
2-lb. package with queen, $3.75
3-lb. package with queen, 4.75
4-lb. package with queen, 5.75
Prompt shipment and safe delivery guaranteed. 20% deposit on booking orders.
Order early and play safe.
CLOVER BEE FARM, Hessmer, La.

Italian Bees and Queens for 1945 Delivery

100 and Over

2 lb. and queen, $4.00
3 lb. and queen, $5.00
Queen, $1.50

All orders booked on 10% deposit.

EUGENE WALKER
357 Indiana St.,
GRIDLEY, CALIF.

BUY U. S. WAR BONDS

GREETINGS

• • •

At this time we extend to all of our loyal customers and friends, sincerest wishes for continued prosperity and a

Merry Christmas

ANNOUNCING PACKAGE BEE AND QUEEN PRICES FOR 1945

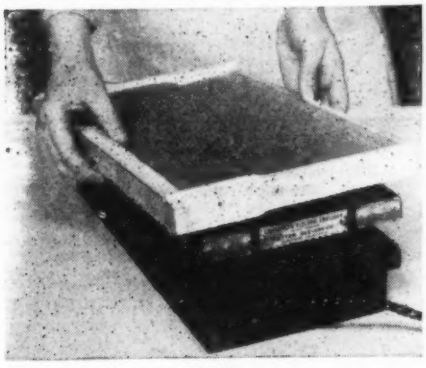
	1 or 2	3-24	27-99	Above
2-lb. pkg. w/q	$3.90	$3.65	$3.50	$3.35
3-lb. pkg. w/q	4.90	4.65	4.50	4.35
4-lb. pkg. w/q	5.90	5.65	5.50	5.35

For queenless packages, deduct $1.00
For Special Loose-Queen packages, add $1.00. Untested Italian Queens, $1.00 each; Tested, $2.00.

TERMS: All orders should be accompanied with $1.00 per package to confirm and hold assignment to the shipping schedule. Balance payable before shipping.

• • •

The Puett Co.
Hahira, Ga.



NEW CARPENTER'S ELECTRIC IMBEDDER

Built from a lifetime experience with bees. Speedy device will imbed all four horizontal wires at once. Simply place foundation in frame and press down lightly until contact has been made—wires imbedded evenly. Will last a lifetime. Quality workmanship.

Price $7.50 f.o.b. Riverside, Cal.
G. A. CARPENTER
4266 Homewood Court
Riverside, Cal.

WE ARE NOW BOOKING orders for 1945 delivery, package bees, queens, and 2 and 3 frame nuclei. Write for prices. Walker Apiaries, Lexington, Texas.

FOR SALE—200 10-frame two story colonies of bees, disease free at $15 per colony, yard run in the yard as they stand. All equipment and fixtures and bees new. W. A. Wiley, 25 Commerce St., West Point, Miss.

FOR SALE—1000 colonies bees in good, clean condition. Well painted 2-story hives. Heavy with honey. Price $10.00 per colony. J. E. WADLEIGH, LA JUNTA, COLORADO.

FOR SALE—500 colonies of bees including all equipment and locations near Monroe, Michigan. Health certificate furnished at time of sale. The Hubbard Apiaries, Manufacturers of Beekeepers Supplies, Onsted, Michigan.

Ten colonies bees in one and one-half story Buckeye hives in excellent condition, free of disease. Inspection certificate furnished. Also equipment including 50 supers with drawn comb, three-frame Novice power extractor, etc. Madison Stephenson, Argos, Ind.

THE NORMA ROY APIARIES. We are booking orders for spring delivery. No deposit required. Italian bees—2 pounds with queen, $3.25; 3 pounds with queen, $4.00. Queenless packages, deduct 70c. Live delivery and health certificate. Norma E. Roy & Son, Hessmer, La.

HELP WANTED

WANTED—Beeman experienced in honey production. Steady employment. Salary or share basis. The Hallman Farms, Blackshear, Ga.

HELP WANTED—Experienced bee men for 1945 in the Southern package and queen units. Also in our Northern units. Write wages expected for year-around job. Must be sober. Tanquary Honey Farms, Inc., Lena, South Carolina.

HELP WANTED—In large bee business. Married or single man. Year around job for good help and permanent job. Top wages above what others are paying for experienced help, and most assured deferment from draft. Write your experience. M. E. Ballard, Roxbury, N. Y.

Experienced package and queen men. Good salaries to good men. Discharged, or disabled service men interested in bees or wood-working, we may have a place for you. Jensen's Apiaries, Macon, Miss.

HELP WANTED — Experienced or inexperienced, winter work in California, summer in Middle West. Profit by working with large, progressive producer. Woodrow Miller, Colton, California.

MISCELLANEOUS WANTED

FOR RENT—Bees on shares. Operating 5,000 colonies western Iowa. Will furnish size unit to suit. All good 10-frame equipment. Good locations. You must know the bee business. If not sufficiently experienced will employ on salary while learning. Need several experienced helpers. Old Taylor Honey Co., Harlan, Iowa.

WISH TO WORK 150 hives on shares. John Tokai, 1837 Woodside Ave., Bay City, Michigan.

WANTED—Lifetime 8-frame extractor, either new or used. Write A. Harrison, P. O. Box 602, Los Banos, Calif. State condition and price.

WANTED—10 frame supers with drawn frames. Prefer some with honey, if possible. H. Franz, 1726 N. 1 St., Milwaukee 12, Wis.

MAGAZINES

THE INDIAN BEE JOURNAL—The only bee journal in India. Sample copy free. Yearly, 7s. 6d., Internatonal Money Order. Apply Editor, Indian Bee Journal, Jeolikote, Dist. Nainital, U. P. India

READ the South African Bee Journal to be conversant with conditions from far afield. Subscription 5/ per year. For further particulars write to the Hon. Treasurer, P. O. Box 43, Cleveland, Johannesburg, S. Africa.

WESTERN CANADA BEEKEEPER, official organ of the Manitoba Beekeepers' Association, one year $1.00; in combination with one year's subscription to Gleanings in Bee Culture, $1.75. Wallingford Building, Winnipeg, Canada.

MANY BEEKEEPERS have proven raising fox, mink, nutria, muskrats, rabbits, highly profitable. Send dime for sample copy. Canada's oldest fur farming magazine tells how. Fur Trade Journal of Canada, Box 31, Toronto 2, Ontario.

THE BEE WORLD—The leading Journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy post free, 12 cents stamps. Membership in the Club, including a subscription to the paper 10/6. The Apis Club, L. Illingsworth. The Way's End, Foxton, Royston, Herts, England.

INTERESTED in Angora Goats? Read the Sheep and Goat Raiser. Hotel Cactus, San Angelo, Texas, the only ranch magazine published serving the Angora Goat industry. Subscription, $1.50, Sample copy, fifteen cents.

Notice to Package Buyers

Orders are being placed rapidly now for

Package Bees

We are especially anxious to supply all our old customers and to do this we must have your order at once as many new buyers are ordering. Reserve your quantity and shipping date NOW!

The same QUALITY packages that have pleased so many in the past will be our offering this spring at the following prices:

DARK ITALIANS

2-lb. with queen, any number $3.50
3-lb. with queen, any number 4.50
Queens clipped 5c extra.
No loose queen packages or nuclei.
10% deposit with order, balance ten days before shipping date.

"THEY PRODUCE"

Rossman & Long

Box 133 **Moultrie, Ga.**

Mention Gleanings When Writing to Advertisers

Beekeepers' Best Friend

AND WHO MIGHT IT BE?
THE AMERICAN HONEY INSTITUTE, OF COURSE!

Because the Institute continues to maintain and increase consumer interest in honey.

Send $1.00 or more to become a member and receive printed matter available.

American Honey Institute

Commercial State Bank Bldg., Madison, Wis.

FOR SALE

• • •

One of the finest and most complete package bee and queen rearing establishments in the whole South. Over 1000 package colonies, 2500 nuclei. Finest clientele, and enough business already booked to take next year's production. Splendid location. Real estate with home and buildings for carrying on the business. With or without wood-working shop and machinery. Clean of disease and priced to sell. Want to retire. Write for particulars.

• • •

Box 1244, Gleanings
Medina, Ohio

Queens—ITALIAN—Bees

We are still accepting orders for Spring 1945 delivery on package bees and queens.

Live Delivery Guaranteed-Health Certificate - Young Bees - Young Queens.

Orders booked 10% down, balance ten days before shipping.

	1-25	25 up,
Queens	$1.10	$1.00
2-lb. pkgs.	3.40	3.25
3-lb. pkgs.	4.40	4.25

SUNKIST BEE COMPANY
Houma, Louisiana

Italian Package Bees and Queens for 1945 Delivery

2-lb. pkg. with queen $4.00
3-lb. pkg. with queen 5.00
4% extra bees with each order

BOOK YOUR ORDER EARLY AND AVOID DISAPPOINTMENT!

JOHN S. SHACKLEFORD
Live Oak, Cal.

QUEENS-

Daughters of Queens Bred for Resistance, with all PACKAGE BEES FOR 1945 SEASON

EPHARDT'S HONEY FARMS, Plaucheville, Louisiana

BETTER-BRED QUEENS---Three-Banded Italians

Thanks for your orders in 1944. Let us serve you in 1945!

CALVERT APIARIES, Calvert, Alabama

ALTHOUGH THE WAR HAS PLACED OBSTACLES, WE HAVE MANAGED TO FILL ALL OUR ORDERS WITH PROMPTNESS. We plan to continue our reliable service during 1945. Our prices will appear in this space soon.

We are fast filling our schedule for 1945. Early bookings advised.

TWO STRAINS

PROGENY-TEST 3-BANDED ITALIANS

VARIOUS HIGH QUALITY RESISTANT STOCK

Garon Bee Company

Donaldsonville, Louisiana
Telegrams, Western Union

Telephone 8614

OBSERVATIONS OF A LEGAL-MINDED BEEKEEPER

(Continued from page 533)

ducers' Association at Anoka, Minn.

Much has been said of the trials and tribulations of beekeeping, but my experiences have been very pleasurable. Before taking up beekeeping my hobby was golf. In golf your ball sometimes lodges behind a high tree, and it is necessary to shoot over the tree in order to get the ball to the green. Sometimes a golfer manages this type of shot, and he likes to tell about it later on. He does not undertake to speak of it as a tribulation but as a great achievement. That's how the trials and tribulations of beekeeping impress me. When I played golf I used to win cups, but they were all empty. With beekeeping I find that all of my cups are filled and that I also fill pails and kettles and cans.

JENSEN'S

PACKAGE BEES AND QUEENS FOR 1945

Many dates are already completely taken, but we hope to have some additional bees and queens in late May and June.

We have tried not to over-book for early dates; experience has shown this to be wise even in normal times. So write us your anticipated requirements, and we shall see what we can do.

"Magnolia State" Strain Italians

Prices:	Queens	2 lb. pkg. with queen	3 lb. pkg. with queen
1-24	$1.25	$4.00	$5.10
25-99	1.15	3.75	4.80
100 up	1.05	3.50	4.50

Booster Packages (queenless) deduct price of queens.

Thanks for all past favors; we deem it a privilege to have served you.

JENSEN'S APIARIES

Macon, Miss.

First Quality Italian

PACKAGE BEES! - QUEENS!

We still have room for package bees for shipment in territory where packages are wanted for March 20th to April 20th.

2-lb. with queen	$3.75
3-lb. with queen	.4.50
Queens	.1.00

DEXTER BROTHERS

Myrtle Beach, S. C.

ORDER NOW

Book your orders early for 1945! We still have lots of dates open for April. We are booked to full capacity from May 1st to May 20th. We feel we have as good Italian bees and queens as can be had. Place your order early and avoid the rush. Western Union or telephone 5711.

• • •

Tanquary Honey Farms, Inc.

LENA, SOUTH CAROLINA

ITALIAN PACKAGE BEES AND QUEENS

We are now booking orders for 1945. Place your orders early for preferred shipping date.

F. E. MORRISON

Box 320 Butte City, Calif.

YES—We put the quality in QUEENS

Three Band Italians

2-lb., $4.00; 3-lb., $5.10

Each additional lb. $1.10.

Book your order early with

THE ANDERSON BEE COMPANY

Opp, Ala.

MOUNTAIN GRAY BEES

NOTICE!

We are sold out on bees and queens until June 15th, 1945.

BOLLING BEE CO.

Bolling, Ala.

BUY U. S. WAR BONDS AND STAMPS

JUST NEWS

(Continued from page 553)

tel reservations should send requests to Dr. V. G. Milum, 104 Vivarium Building, Champaign, Illinois. Train and hotel reservations should be made early.

• • •

Mr. Arthur King, 2415 Emil Ave., Louisville, Ky., was elected president of the Kentucky Beekeepers' Association on November 15, 1944. Other officers elected at the meeting, were: W. D. Carroll, Vice President, Buechel, Ky.; Arthur Lose, Jr., Louisville, Secretary and Treasurer.

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TENTATIVE PROGRAM
NORTH DAKOTA BEEKEEPERS ASSOCIATION
Fargo, North Dakota

(Room 309, Agricultural Building, North Dakota Agricultural College).

Wednesday, December 6:

9:30 a. m., Registration
Report of Secretary-Treasurer, Mr. Arvid Benson, Secretary Treasurer, NDBA Business
Report of Bee Inspection, By Dr. J. A. Munro, Entomologist, NDAC
Problems in Honey Production, Mr. Charles Hausmann, President, NDBA
Discussion led by Messrs. Leo A. Bear and Max Cook.
What's Ahead for Beekeeping, Prof. F. B. Paddock, State Apiarist, Iowa State College, Ames, Iowa
Questions and Answers.
Dinner at NDAC Cafeteria.

1:30 p. m. How Plants Secrete Nectar, Dr. E. A Helgeson, Botany Department, NDAC
Discussion led by Messrs Ed. Arneson and Art. Osmundson.
Bees in Relation to Agriculture, Dr. H. L. Walster, Dean and Director, NDAC.
Sweet Clover Varieties which Prolong the Blossoming Period, Prof. T. E. Stoa, Agronomy Dept. NDAC.
Discussion led by Messrs. Harold Goltz and E. B. McCracken.
Labor Saving Devices and Short Cuts in Beekeeping, E E. Elmquist, E. H. A. Fischer, R Osmundson and H. A. Schmitt
Highlights of No. Dak. Agriculture (illustrated by color movies), Mr. W. P. Sebens, Greater North Dakota Association
Business Session and Election of Officers.

6:15 p. m. Beekeepers Banquet and Program of Entertainment (to be arranged)

BEEKEEPERS SHORT COURSE

Thursday, December 7:

9:00 a m. Around the year in Beekeeping, Dr. Munro.
10:00 a. m., What's New in Package Bee Management, Prof. Paddock
11:00 a. m., The Realm of the Honeybee, USDA movie film.
Questions and Answers.
Dinner at NDAC Cafeteria
1:15 p. m., Improving your Strain of Bees, Professor Paddock.
The Bacteriology of Beekeeping, Dr. C. I. Nelson, Bacteriology Dept. NDAC.
Promising Developments in Sweet Clover Weevil Control, Dr Munro.

EDITORIALS

(Continued from page 508)

and feed themselves throughout the year.

This doesn't mean that bees should be neglected but it does mean that if the owners of bees have enough sense to leave an abundance of stores —honey and pollen, for the needs of each colony, also provide adequate protection against the elements, the bees will prosper, and, under favorable conditions, store surplus honey for the owners.

• • •

Upper Entrances There appears to be considerable confusion on this hive entrance business. Apparently the nomenclatures require clarification. Without attempting a review of past developments along this line, it is pertinent to say that some types of upper entrances have been in use for many years. Also, there is a difference between a top entrance and a middle front entrance. Obviously, the top entrance occurs at the very top of the hive, whereas an upper, or as it is sometimes called, a middle front entrance, may occur anywhere between the top and bottom of the hive. Somehave called it an auxilliary flight hole. That is really what it is.

We do not use a top entrance hive, but we have for a number of years used an upper entrance consisting of an auger hole of about ⅝" directly below the hand hold in the upper brood chamber, frequently called the food chamber. We like this arrangement principally because it affords a convenient flight hole for bees during winter and makes it unnecessary for the bees to go down through the bottom of the hive (which is colder than the top) to get out and in.

Furthermore, this upper flight hole helps to avoid suffocation in case the lower or main entrance gets plugged shut with ice or dead bees. The upper entrance being practically adjacent to the winter cluster affords a convenient exit for bees in need of a winter flight.

And lastly, this upper entrance helps to expell some of the excess moisture that may accumulate during the winter months. It would seem that an upper entrance of some kind, in addition to a restricted low-

(Continued on next page)

This photo shows portion of one of our queen yards containing over 6000 nuclei

ITALIAN PACKAGE BEES AND QUEENS

2 lbs. with queen $4.00
3 lbs. with queen ..... 5.00 • BY EXPRESS •
Extra queens, each 1.25

OVERBEY APIARIES, BUNKIE, LA.

FOR THE YULETIDE SEASON

(Continued from page 525)

eggs, ½ teaspoon grated lemon rind, 1 cup finely chopped walnut meats, and 1 cup seedless raisins.

Sift flour and measure; sift again with baking powder, soda, salt, and cinnamon. Cream shortening; add honey gradually, beating to combine. Add eggs one at a time, beating well after each addition. Gradually add flour mixture, stirring until smooth. Add remaining ingredients. Drop by teaspoonfuls on well greased cookie sheet. Bake in moderate oven, 375 degrees F., 15 minutes, or until slightly browned. Remove at once to rack to cool

Honey Walnut Sticks

One cup honey, 2 cups sugar, ½ teaspoon salt, 2 tablespoons butter, 1 cup evaporated milk, 1 teaspoon lemon extract, and 1 cup chopped walnuts.

Combine honey, sugar, salt, butter, and milk. Cook slowly to boiling point, stirring occasionally. Continue cooking slowly until a few drops tested in cold water will form a firm ball. Remove from heat. Add lemon extract. Pour mixture over nutmeats sprinkled on a buttered pan. When cool enough to handle pull until stiff and creamy. Cut into sticks and wrap at once in waxen paper.

Honey Pineapple Upside Down Salad

Two tablespoons unflavored gelatine, ½ cup cold water, 1½ cups boiling water, ⅓ cup honey, 1 teaspoon salt, ½ cup pineapple syrup, ½ cup mild vinegar, ¼ cup lemon juice, few drops green coloring, 3 slices pineapple, 3 cups finely shredded cabbage, 1 cup finely diced celery, radishes or cucumbers, ¼ cup diced pimiento, and ¼ cup diced green pepper.

Add gelatine to cold water, let stand 5 minutes. Add boiling water, honey, and salt. Stir until dissolved. Add pineapple syrup from slices, vinegar and lemon juice. Cool. Stir in coloring to desired shade. Pour into loaf pan to depth of ¼ inch. Chill till almost firm. Arrange two slices of pineapple over gelatine and chill until firm. Dice remaining pineapple fine, add to vegetables, fold into remaining gelatine. Pour over pineapple in pan and chill. Turn out, serve with mayonnaise.

Golden Honey Pudding

One envelope Knox Sparkling Gelatine, ¼ cup cold water, 1 cup scalded milk, (not boiled) ⅓ cup honey, ½ cup orange juice, 2 eggs, ½ cup cream or evaporated milk, whipped, ¼ teaspoon salt, 1½ tablespoons lemon juice, and the grated rind of ½ orange.

Beat egg yolks with the honey and add to the scalded milk in a double-boiler. Cook over boiling water until mixture coats spoon. Remove from fire. Soften gelatine in the cold water. Add to hot custard and stir until dissolved. Cool slightly and add lemon juice, orange juice and rind, and salt. Cool, and as mixture starts to congeal, add the whipped cream and fold in stiffly beaten egg whites. If a deeper tint is desired, use a few drops of yellow vegetable coloring.

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EDITORIALS

(Continued from previous page)

er entrance, is an advantage in cold climates and especially where two-story wintering is practiced.

• • •

The Winter Cluster The construction and workings of the winter cluster of bees on the combs of a hive during cold weather is perhaps not well understood by the rank and file of beekeepers. Just how honeybees, said to be cold-blooded insects (which means that their body temperature is the same as the air surrounding them) can live through prolonged cold spells and survive the rigors of a cold winter in the North, constitutes one of the most marvelous phenomena in all nature. And yet bees do just that and have been doing it in their natural habitat for thousands, perhaps millions, of years.

The articles on this subject, by Dr. V. G. Milum in this and the preceding issue should throw some light on what happens within the winter cluster.

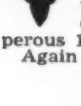
XUM

PACKAGE BEES
for Spring Delivery

with Three Banded Italian Queens of highest quality! WRITE NOW for prices and open shipping dates.

• • •

JOHN C. HOGG
Tifton, Ga., U. S. A.



CARNIOLANS
CAUCASIANS

We wish you all again a very Merry Christmas and a happy and prosperous 1945.
Again we thank our many customers.
ALBERT G. HANN
Glen Gardner, N. J.

"HONEY GIRL" ITALIAN
Package Bees and Queens
ST. ROMAIN'S "HONEY GIRL" APIARIES
Moreauville, La.

1945 PRICES
ITALIAN PACKAGE BEES WITH QUEEN
2 pounds and queen. $3.75 each
3 pounds and queen, 4.75 each
4 pounds and queen, 5.75 each
QUEENLESS PACKAGES
2 lbs., $2.85; 3 lbs., $3.85; 4 lbs., $4,85
20% down books order. Health certificate and safe delivery guaranteed.
HESSMER BEE FARM, Hessmer, La.

CAUCASIAN-ITALIANS

(Continued from page 527)

In another case, on a clear, cool morning in November, while fixing up the bees for winter it was necessary to brush a few bees out of partially filled supers of aster honey. The hybrids, when brushed onto the ground in front of their hive marched into the hive—wings buzzing as usual, but the Italians lay on the ground where they fell, stiff with cold, to die.

Thus for the past twelve years I have been trying to select an improved strain from the hybrid, without too much success! A colony good in one respect is bad in another. If a person could test enough queens he theoretically should be able to select the ideal bee in the second filial generation. The greater the number of traits being considered, the greater the number of queens that one would have to test out. Thus one contrasting pair of traits, as black vs. yellow color, would give one out of four with the desired trait in pure form; two pair, one out of sixteen; three pair, one out of sixty four, and so on. Practically, it is necessary to select for very few things at a time. And by the time one has located a queen whose daughters are desirable, she is old and soon dies. Time after time I have located a good queen only to find her superseded while waiting for her daughters to demonstrate their quality. Developing an improved strain from the hybrid is a long and tedious job—and not profitable. After twelve years we have one quality nearly fixed, namely disease resistancy. (This may have involved several pairs of unit-characters). Other qualities vary.

the Hubbard APIARIES

WRITE FOR FREE CATALOG

Quality Bee Supplies Factory Prices
Prompt Shipment from Stock
Satisfaction Guaranteed

THE HUBBARD APIARIES
Manufacturers of Bee Supplies
ONSTED, MICHIGAN

WINTERING

(Continued from page 519)

When bees are packed in slater's felt, means must be provided so that the leaves between the felt and the hive shall dry out.

Quadruple Case of Former Days Less Frequently Found

This quadruple case, it was believed, was a solution of the wintering problem. It was argued that if a little packing was a good thing, more was better, and so, even though some used this case, they also used as much as six or eight inches of packing on the sides; four or five inches on the bottom and ten or twelve inches of packing on top. Experience has shown that this method of wintering often established a cold storage plant for the colonies. The bees do not know when the weather warms up on the outside so that they can take necessary cleansing flights, nor can the sun, on warm days, penetrate to the cluster so that it can change to fresh stores. Often colonies starve to death within three or four inches of honey. It has been pretty well established that bees do not necessarily die of cold, but starve when they cannot move to fresh supplies of honey.

Pettit's Package Bees for 1945

WITH QUEENS

Sold out to May tenth; can accept more orders for shipment later.

WITHOUT QUEENS

Can accept orders for shipment from April first on through May.
Prices will be released soon.

• • •

MORLEY PETTIT

Tifton, Georgia U. S. A.

Buy U. S. War Bonds

Gaspard's Quality Italian Package Bees and Queens

We are now booking orders for Spring, 1945. Only 20% with order, balance at shipping time. 50c more per package after January 1st. Prices as follows:

2-lb. package with queens	$3.50
3-lb. package with queens	4.50
4-lb. package with queens	5.50

J. L. GASPARD, Hessmer, La.

When Writing to Advertisers Mention Gleanings

OUR SITUATION

Our shipping schedule is full up to the second week in May. If we can be of service to you after the above time, please write us. It is possible that more orders will be added during the early spring. Thanks for your good patronage.

BESSONET BEE COMPANY, Donaldsonville, La.

QUEENS 3 KINDS

$1.25 each Send for FREE circular

ITALIANS
Caucasians bred to Italian drones
Daughters of Queens bred for Resistance
2-lb. pkg. bees with queen, $4.00 3-lb. pkg. bees with queen ,$5.00
Over 25 years a shipper in U.S.A. and Canada

BLUE BONNET APIARIES, Route 1, Box 70, Mercedes, Texas

TOWNSEND SALES COMPANY

E. D. Townsend Northstar, Michigan

I pay ceiling price for Michigan honey, either white, amber, or buckwheat. What have you? This price, $7.20 per can, is for honey at your door, in 60-lb. cans, no shipping case required. A postal card will bring our truck to your place at once. No new customers for honey wanted. Another year, when crop conditions are better, it is hoped to have honey for all comers. Until then, thanks a lot.

REQUEEN

When you get your honey crop off and your bees are still gathering a little is an ideal time to requeen. The advantages are many — lots of young bees in the fall will insure better wintering, less spring dwindling, quicker spring build-up. Then too, these young queens will give you less trouble with swarming next spring. Why not try it this fall?

PRICES

Lots of:	**1 to 24**	**$ .90 each**
	25 to 99	**.85 each**
	100 or more	**.80 each**

The Stover Apiaries

Mayhew, Miss.

Ship Us Your Beeswax

We are always in the market for your beeswax and will pay you 41½ cents per pound in cash, or 43½ per pound in trade. The freight will be allowed on 100 pounds and over. We will also accept beeswax on the make-up plan.

We need tons, yes, carloads of beeswax to take care of our increased sales of comb foundation. Remember that combs made with Three-ply Foundation do not sag, nor warp, nor melt down. Your comb worries are over when you buy THREE-PLY.

SEND IN YOUR WAX

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A. I. Root Co. of Indianapolis
121 N. Alabama St., Indianapolis 4, Ind.

A. I. Root Co. of Syracuse
1112 Erie Blvd. East, Syracuse 3, N. Y.

A. I. Root Co. of Iowa
Council Bluffs, Iowa

The A. I. Root Company, 12 W. 21st St., New York 10, N. Y.

THE A. I. ROOT COMPANY, Medina, Ohio

Mail your order soon for 1945 Bee Supplies

York's Package Bees and Queens
QUALITY BRED ITALIANS

We are pleased to announce our new prices for package bees and queens for the season of 1945. Have a larger supply and fully prepared to serve you better with highest quality. Reserve your bees now for better choice of shipping dates. We have not sacrificed quality for price. Our bees are our best advertisers, ask any of our customers. Shipping begins around April 1st, depending on season. Prices in U. S. funds are as follows:

PACKAGE BEES WITH YOUNG LAYING QUEENS

Quantity	1 to 2	3 to 27	30 to 96	99 up
2-lb. pkgs.	$4.25 each	$4.10 each	$3.95 each	$3.75 each
3-lb. pkgs.	5.25 each	5.10 each	4.95 each	4.75 each
Extra Queens	1.30 each	1.25 each	1.25 each	1.25 each

Queenless Packages, deduct $1.10 per package.

Order in units of three if possible as regular crates are made up with three packages each for better handling and to conserve space. Bees are supplied in neat new cages. Certified bees from our own bee yards, state registered and state inspected. Extra queens by mail and package bees by express only. We rcommend 3-lb. packages as best all around size. If convenient, small orders cash; larger orders, $1.00 deposit per package to hold order, and balance not less than two weeks prior to shipping date. Help us to help you—order early as demand is expected to exceed the supply. Order early as demand is expected to exceed the supply. Order direct from this ad and save time.

YORK BEE COMPANY, Jesup, Georgia, U. S. A.

(The Universal Apiaries)

Buy U. S. War Bonds and Stamps

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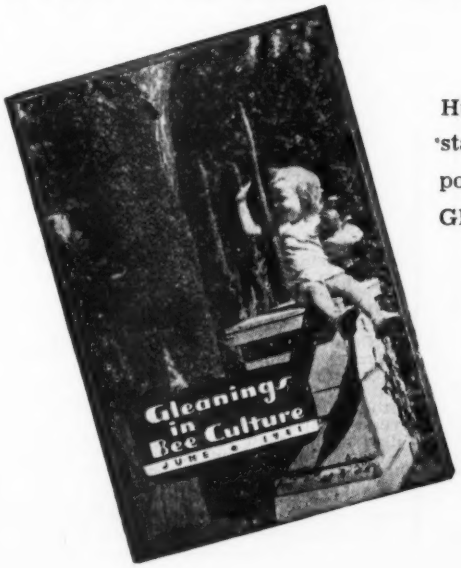

Hundreds of new beekeepers have started this year. Their success is important. **"Talks to Beekeepers"** in Gleanings in Bee Culture will help them.

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or
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(At the Regular Rates)
And we will enter your subscription FREE for one year.

Mail to Circulation Manager
GLEANINGS IN BEE CULTURE
Medina, Ohio

PACKAGE BEES AND QUEENS

Leather Colored Italians
Bred for Production

Prices of Package Bees with Queens

Lots of	2-lb.	3-lb.	Ex.Queen
1 to 24	$4.00	$5.00	$1.25
25 to 99	3.85	4.80	1.10
100 or more	3.75	4.70	1.10

Terms: 25% deposit to book order, balance ten days before shipping date. We replace any bees that die in transit if it is our fault, if it is the carriers' fault, file claim with them. We start shipping February first. Old customers will be given preference.

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Collier City, Fla.

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MAGAZINE MART

Dept. G B Plant City, Florida
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...America's Farsighted Beekeepers

IT is especially fitting, we think, this holiday season to acknowledge our deep gratitude to America's progressive Beekeepers.

Our firm conviction is that in this last, difficult season, the splendid cooperation of these Beekeepers set a new high in enlightened teamwork

They dug deep into their precious hive stocks to help maintain the name and fame of the country's foremost honey brands.

And they did this despite the most tempting inducements "to go it alone" that Beekeepers, as a body, have ever faced.

Because of the wartime shortage of all sweets, the demand for honey by the Beekeeper's home-town neighbors was extremely heavy.

Then, too, because of bad weather, labor shortages, the decline in honey plants, every Beekeeper's crop was woefully below normal.

Thus, had he chosen, the Beekeeper could have sold all his honey locally without regard for the future welfare of the industry as a whole.

But, thanks to the common sense and long vision of many foremost Beekeepers across the land, that was not what happened.

Those Beekeepers appreciated that America's branded honey market is the one, biggest permanent market for honey . . . the one stable market upon which they must count for good sales and good prices in years ahead.

So, wisely, they acted in accordance with this knowledge. They continued to sell their premium quality honey to the reputable Packers whose names appear on this page.

Such loyalty from old-time friends, we are convinced, deserves widespread and sincere recognition.

So to these friends, we are happy to say "Thank you." Your service to the entire honey industry, in these trying times, we are confident, will not go unrewarded.

SUPERIOR HONEY COMPANY
Los Angeles, Calif.

C. W. AEPPLER COMPANY
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THE JOHN G. PATON COMPANY, INC.
New York City

THE SIOUX HONEY ASSOCIATION
Sioux City, Iowa

XUM

BEES WORKING IN RAIN

By W. P. Kinard

In your "Talks to Beekeepers" on bees working during a shower, I have noted that they are good weather forecasters. When a cloud comes up that they will rush in ahead of the wind and rain in great numbers. It seems to me that they are more afraid of wind than a gentle slow shower. I believe a bee can stand quite a bit of rain. If summer showers are scattered and not general it would seem that this is realized by the bees, and some are likely foraging beyond the area covered by the shower. I don't think I ever noticed bees going to the fields during a general continued rain.

Louisville, Miss.

• • •

Letter to Penn G. Snyder, Trotwood, Ohio, From His Son Bill.

British Isles, February 26, 1944.

Dear Dad:—

You thought when you brought up the bees from Porto Rico to New York City you had a hard time. You do not know the half of it. What we have been going through in the past seven days would take a book to tell it. Long missions, work, no sleep and Hell over Germany.

I cannot say just what has happened, but we brought back our ship, **but it will never** fly again. God was on our side or we would not have gotten back at all. None of us was hurt, but the ship was a mess.

We have had an experience that very few crews go through. There was a running fight for over two hundred miles. There were a goodly number of fighters after us. Would like to tell you more but it is verbotten. Well, so much for that bad dream. I only hope that we don't have any more like that one.

Love,

Bill.

(Since Mr Snyder, who is a commercial beekeeper, received the above letter, he has learned that his son Bill was killed in action.—Editor.)

TOO LATE TO CLASSIFY

SELLING prewar new power extractor. H. D. Hopkins, Otterville, Mo.

NUCLEI WANTED—About 50 for coming season, from reliable party. Joe Finfera, Lyons. Ohio.

WANTED—Honey tank, stainless steel or galvanized. Must be in A1 condition, not over 60 gallon capacity. Quote price. Lose Bros., 206 E. Jefferson, Louisville, Ky.

Monthly Honey Market

INFORMATION FROM PRODUCING AREAS

(Prices generally refer to sales at wholesale by beekeepers f. o. b. shipping points except as otherwise noted. Dates shown for each section indicate approximate period covered)

Intermountain Section: (Period Oct. 24-Nov. 9)—Weather has been very favorable over practically the entire Intermountain Region during this period. Large portions of Colorado and Montana are still very dry. Rains in Idaho, Utah, and parts of Nevada have put the soil in good condition for winter and helped fall plants. Colorado has had the driest fall in a good many years, and much of that State still needs rain badly. Bees are in good condition for winter in all sections except portions of Utah and southern Idaho. Poisoning has been responsible for many weak colonies in Utah, while in portions of Idaho bees built up very slowly last summer and produced a very light crop. In all sections labor shortages have hindered the fall packing operations of large commercial beekeepers, but practically all now have their bees in winter quarters. Demand for honey continues very good, with a very large percentage of the crop out of producers' hands. A very large tonnage has been shippepd to cooperatives through the middlewest and east. Less honey is being packed by beekeepers for local use, and in most sections local demand for honey has fallen off during recent weeks. Apparently considerable dark honey has been carried over from last season by retailers and local jobbers.

Southwestern Area: (Period October 26-November 11)

Northeast Texas. Warm growing weather continues in this section. Mint and clover plants are in unusually good condition. A heavy rain on November 8 did considerable damage to the cotton crop, which had not been completely harvested.

SUMMARY

The fall season over the entire country has been unusually favorable for bees and for beeyard operations. Except for some of the more northern states and in the

ITALIAN BEES AND QUEENS

We are booking orders for Spring, 1945. Only 20% with order, balance ten (10) days before shipping date. 50c more per package after January 1st. Prices as follows:

2-lb. package with queens $3.75
3-lb. package with queens 4.75
4-lb. package with queens 5.75

THE STAR BEE FARM
Hessmer, La.

ITALIAN BEES AND QUEENS IN PACKAGES

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3-lbs. with queen 4.75
4-lbs. with queen 5.75
Shipment to be made subject to weather conditions. 20% books order, balance 10 days before shipment.

DIXIE BEE FARM
Normand Bros., Props.
Hessmer, La.

mountain areas there were few killing frosts prior to early November. Some sections of the country, especially through the north central States and Plains Area were becoming rather dry, but rains during late October and early November have improved moisture conditions in most areas. The long open fall has aided beekeepers in completing extracting and packing operations before winter sets in, although in some sections labor shortages have slowed down these operations somewhat. This is especially true among the larger commercial beekeepers requiring a fairly large labor force.

In ppractically all sections of the country bees are in good condition for winter. Water stores are ample in most sections. However, in the lake States and portions of the Plains Area rather heavy feeding has been necessary and some additional feeding may be required to bring bees through the winter.

Demand for honey especially the lighter grades has been very good. although still somewhat below the very active demand that pprevailed last season. It now appears that large lots of honey will mostly be out of beekeepers' hands before the first of the year. In some sections demand for dark grades of noney is still lagging. While some packers and commercial users are offering below ceiling prices for dark honey, there apparently have been few if any sales of consequence made below the ceiling. Comb honey is extremely light and sales have consisted of small lots at an extremely wide range of prices. Practically all sales of extracted honey have been at the ceiling regardless of flavor or color. Offerings of beeswax have been light with all movement at the ceiling of 41½c cash and 43½c in trade f. o. b. to beekeepers.

Amendment 2 to revised Maximum Price Regulation 264, effective November 6 increased importers maximum buying and selling prices for crude pure beeswax produced in Portuguese West Africa by 2½c per pound. The maximum price in quantities of one ton or more f. o. b. ocean port of origin on beeswax imported from Portuguese West Africa is now 33¾c per pound, with beeswax imported from other African territories 31¼c. The increase permitted by the amendment is available only for purchases and sale of crude beeswax produced in Portuguese West Africa. This amendment also involves two minor changes covering weight franchise and ocean port of origin. Under the weight franchise any difference between net shipping weight and net landed weight in excess of one percent shall be the sellers' responsibility and loss. The buyers may not pay for any difference between net shipping weight and net landed weight in excess of one percent.

Normally the expression "f.o.b. ocean port of origin" means f. o. b. the port where the material is loaded on an ocean going vessey with through bill of lading to the United States Howeevr, it appears that many ocean ports normally used by foreign sellers are inactive due to a shortage of ships. The wax must be transported by train, truck, or coastal vessel to a larger and more distant port, which involves extraordinary freight expense which it appears proper for the purchaser to pay. This amendment provides that purchases shall be made at the established prices f. o. b. actual port of origin but that in the circumtances described above the buyer may also pay the amount by which freight charges from the sellers' shipping point to the ocean port of origin by the cheapest route exceed the freight charges to the port normally used by he seller Copies of the amendment may be obtained from the Office of Price Administration, Washington, D. C.

Monthly Report of Honey Producers

Date Rec.	State	Name	1 Pct. Sold	2 Lg. Lots Ex.	2 Lg. Lots Cb.	3 To Groc. Ex.	3 To Groc. Cb.	4 Cons. Ex.	4 Cons. Cb.	5 Move.	6 Con. of Cols.	7 No. Win.	8 Con. of Pl.
11	S-Ala.	J. C. Dickman	20			.93		1.11	.35	Fair	80	100	80
13	B. C.	A. W. Finlay	80							Fair	90	120	100
13	S-Calif.	L. L. Andrews	95	.12				1.10		Fair	90	95	100
17	SE-Colo.	Otis E Adcock	30	.11¾		.90	6.50	1.15	.35	Fair	100	100	100
8	E-Conn.	Allen Latham	10					1.25	.25	Fair	100	100	80
13	S-Fla.	C. C. Cook		.11½		.85		1.10		Slow	100	120	100
13	C-Fla.	Harry Hewitt	100			.85		1.00			80	100	100
10	SE-Ga.	J. J. Wilder	98							Rapid	100		100
11	N C-Ind	T. C. Johnson				.90	6.00	1.00	.30				
9	NW-Ind.	E. S. Miller	50			.95		1.10	.35	Fair	100	100	95
9	W-Iowa	E. G. Brown	95	.12				1.11		Fair	100	120	100
16	N-Mich	Ira D. Bartlett	75			1.00		1.25		Fair	100	100	100
7	E-Mich.	L. S. Griggs	90	.12				130		Fair	80	90	80
9	S-Mich.	Floyd Markham	60	.12		.97		1.25	.35	Fair	100	90	80
9	C-Mich.	E. D. Townsend	95	.12						Rapid	85	90	90
10	W-Minn.	B. L. Morehouse	90			.95		1.10		Rapid	85	95	100
9	S-Minn.	J. F. Garner	90	.12		.96		1.25		Fair	100	100	90
20	C-Nebr.	J. H. Wagner	20					1.19	.31	Slow	95	95	100
13	W-Nev.	Geo. G. Schweis		.12					.30	Fair	100	75	100
8	NW-N.Y.	Geo. B. Howe	90	12				1.10	.35	Slow	100	90	90
8	C-N. Y.	F. W. Lesser.		12				1.00		Fair	100	100	100
13	S-N.D.	J. F. Norgren								Rapid	90	100	110
15	C-Ohio	R. D .Hiatt	100	.12½		1.05		1.45		Fair	100	100	95
13	NC-Okla.	C. E. Stiles	60			.90		1.20		Fair	85	90	95
13	SE-Pa.	D. C. Gilham	20			1.00	6.25	1.25	.35	Fair	95	100	
8	E-Tenn.	J. M. Buchanan	75					1.25		Fair	100	110	90
10	E-Tenn.	W. L. Walling	100					1.50		Fair	90	100	90
9	S-Texas	C. G. Mayes		.12		.75				Rapid	75	75	70
10	S-Texas	H. B. Parks	80							Fair	100	120	100
13	W-Utah	Wm. Moran	90	.12		.96		1.25		Fair	90	90	90
8	S-Va.	L. N. Gravely						1.75	.40	Fair	80	90	88
10	N-W. Va.	W. C. Griffith	90					1.50	.35	Rapid	90	75	90

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We can save you money on highest quality supplies.

No. 14 four-frame Extractor, non-reversible, hand power	each	$14.75
10-fr. 1 story METAL Cover Hives, complete, No. Fdn.	lot 5	14.75
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10-frame Wood Bound Queen Excluders .....5 or more, each		.80
Hoffman Brood Frames ..... lots of 100		5.05
25-lb. lots Thin Surplus Fdn. 3 7 8 x 16 - 4½ x 16½		19.75
25-lb. lots Hercules Plain Brood 8 x 16¾ - 8½ x 16½		17.50
25-lb. lots Hercules Wired Brood 8 x 16¾ - 8½ x 16½		18.50
HAVE YOU TRIED OUR WIRED "IRONSIDES" FOUNDATION		
100 Sheets "Ironsides" 8½ x 16½ only		12.50
Wire Face Bee Veils		.80
Bees Escapes	each	.12
Smokers 4 x 7"	each	1.00
2" Hive Staples	lb.	.30
60-lb. cans (new)	each	.38
1-lb. Glass Jars, packed 2 dozen per case		1.00
2-lb. Glass Jars, packed 1 dozen per case		.90
5-lb. Glass Jars, packed ½ dozen per case		.55

TERMS: Cash with order, f. o. b. Cincinnati

WANTED—Shipments of Honey and Beeswax

We also render wax from old comb or cappings. Send for our price list.

We pay highest ceiling prices on Honey and Beeswax.

THE FRED W. MUTH COMPANY

229 Walnut Street **Cincinnati 2, Ohio**

NOTICE

Write for prices for having your wax made up or outright purchase of

SCHMIDT'S Economy Foundation

Not excelled for quality strength and workmanship

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BUY YOUR CONTAINERS

from

OUR COMPLETE STOCK

UTILITY GLASS JARS:

Made according to Government specifications of clear flint glass with white coated metal caps.

10-lb. jars—case of 4—...45
5-lb. jars—case of 6—...42
2-lb. jars—case of 12—...42
1-lb. jars—case of 12—...38
½-lb. jars—case of 48—$1.28

SIXTY POUND CANS:

Well seamed and soldered, equipped 2½" wax board line caps.

Box of two 60-lb. cans....$1.00
60-lb. cans in bulk, each .32
60-lb. cans per carton of 24 7.44

COMB HONEY CONTAINERS:

Comb honey shipping cases, window cartons and cellophane bag and flat style wrappers for all size sections. Write for prices.

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Manufacturers of Bee Supplies

Boyd, Wisconsin

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16 oz. Economy Jars, carton 24 each,	$ .70
32 oz. Economy Jars, carton 12 each,	.42
5 lb. Economy Jars, 12 cartons,	5.00
24 cartons,	9.95
60-lb. Square tin cans, carton of 16,	5.40

Quick shipment from large Paducah stock

THE WALTER T. KELLEY CO.

Paducah, Kentucky

Root QUALITY BEE SUPPLIES FOR MICHIGAN

Buy With Confidence

Root QUALITY BEE SUPPLIES FOR MICHIGAN

ROOT HIVES have the preferred style cuts and dimensions and are the standard the world over.
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Inexpensive packing paper, 500 sq. ft. roll $1.25
USE IT TWICE BRAND packing paper, 500 sq. ft. roll 1.95

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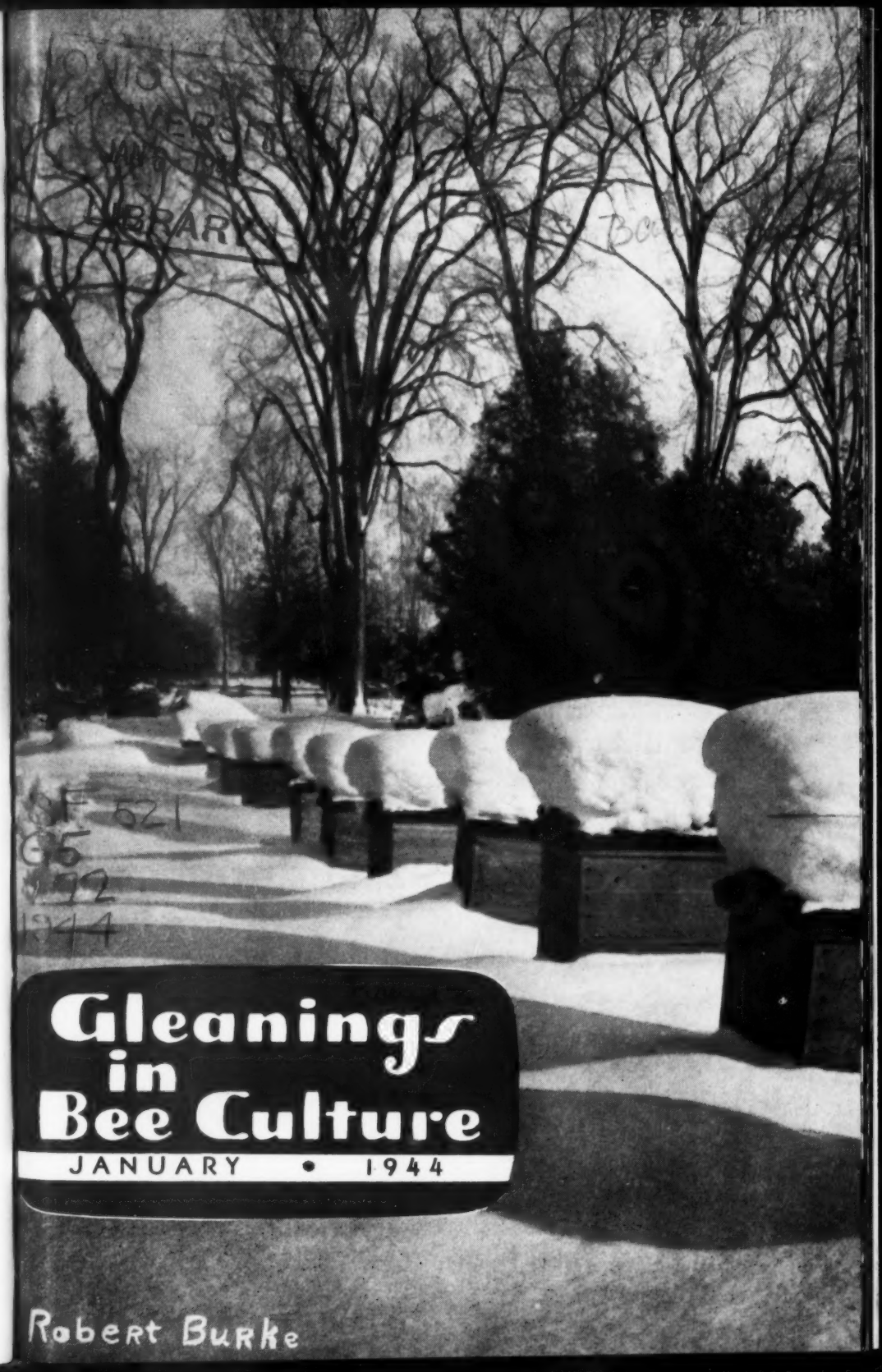

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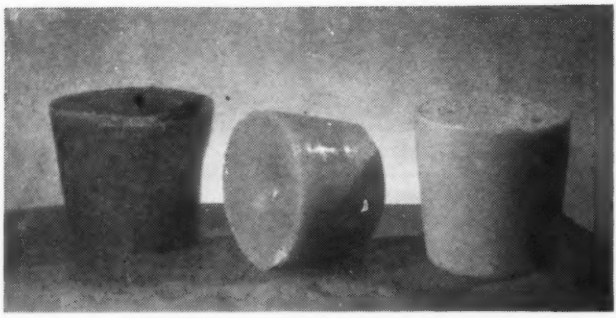

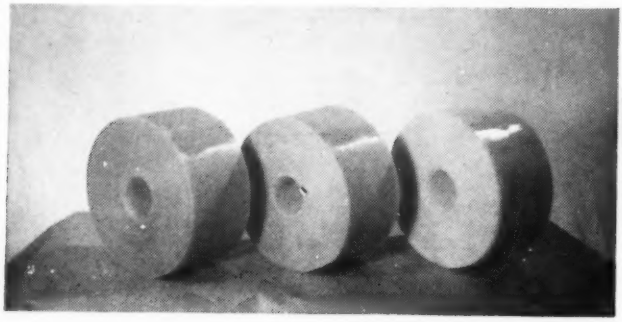

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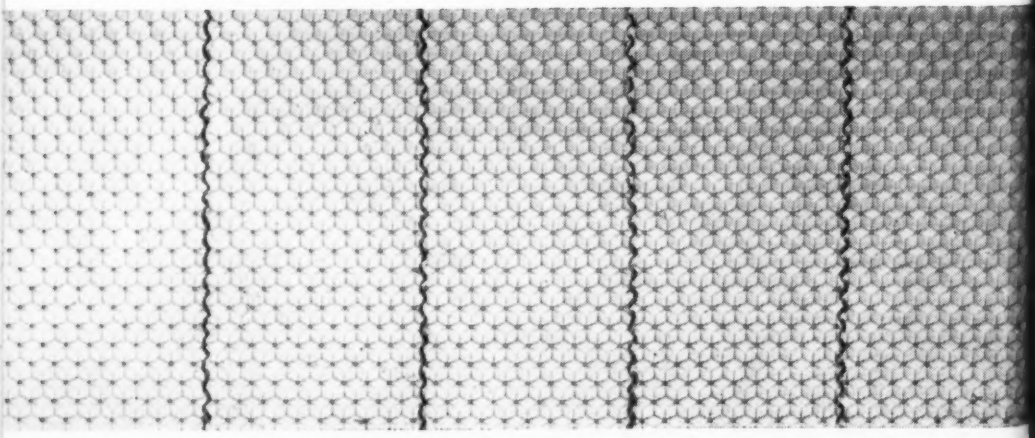

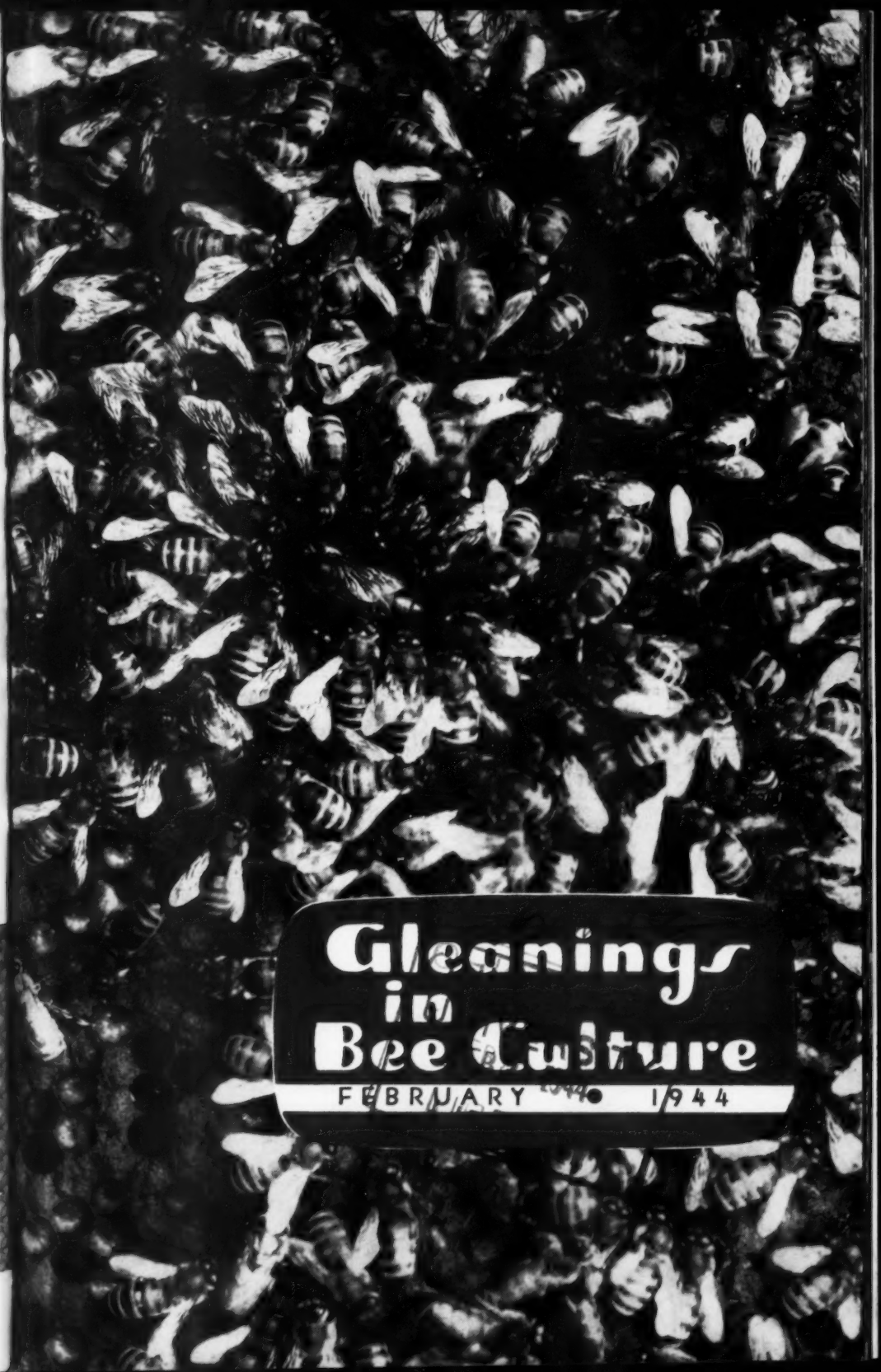
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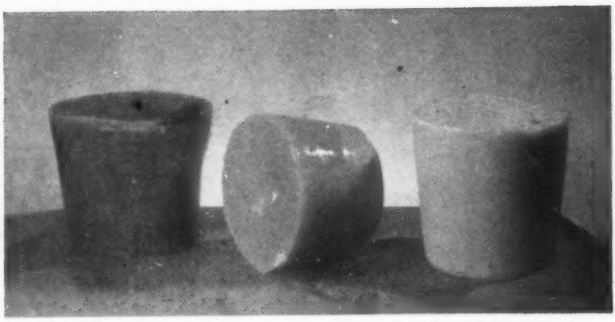

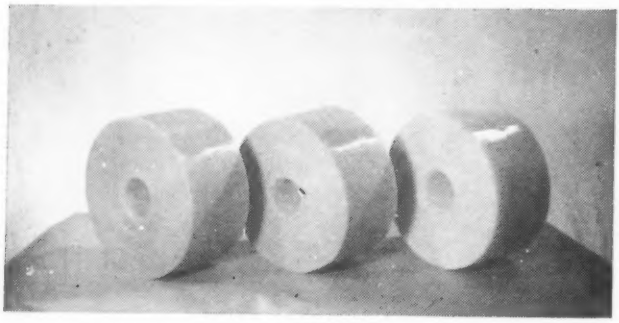

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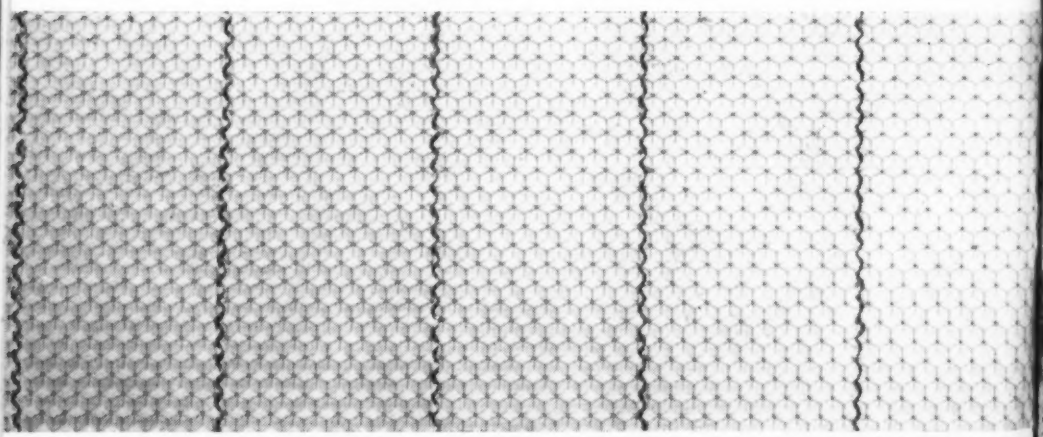

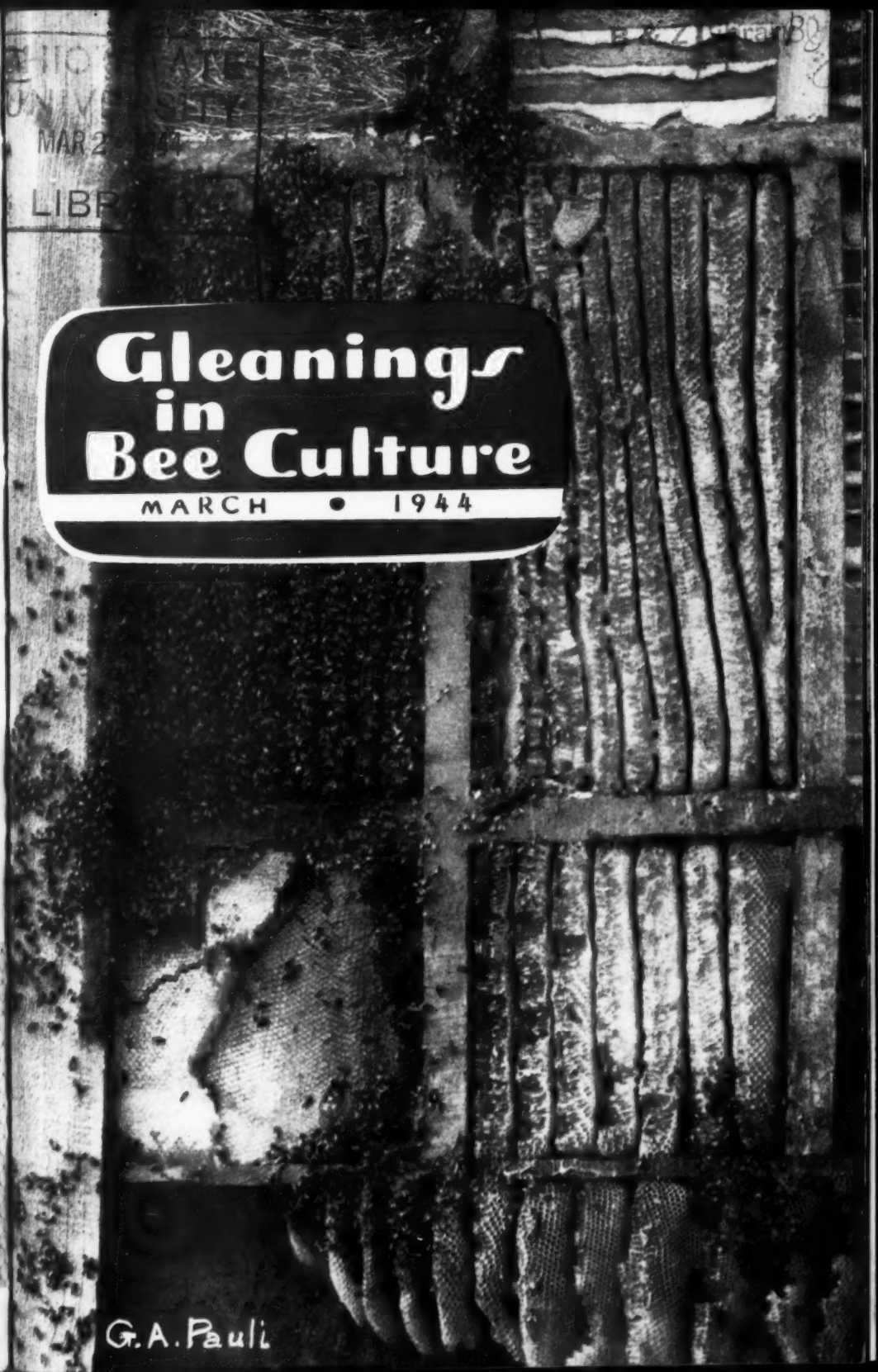
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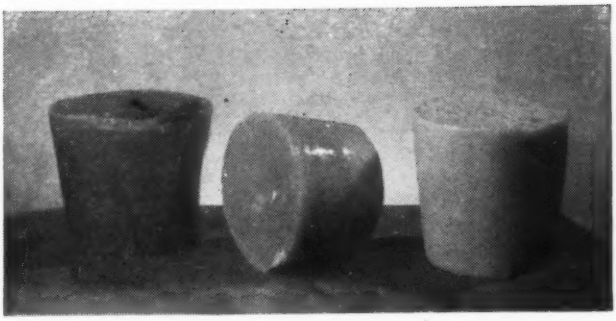

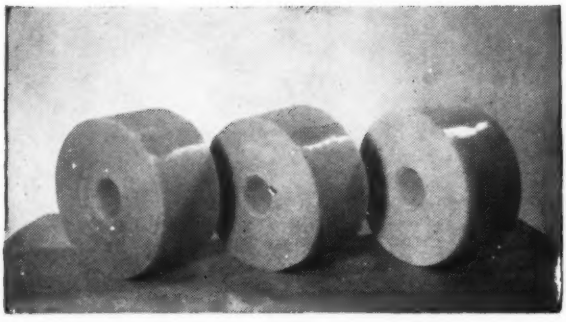

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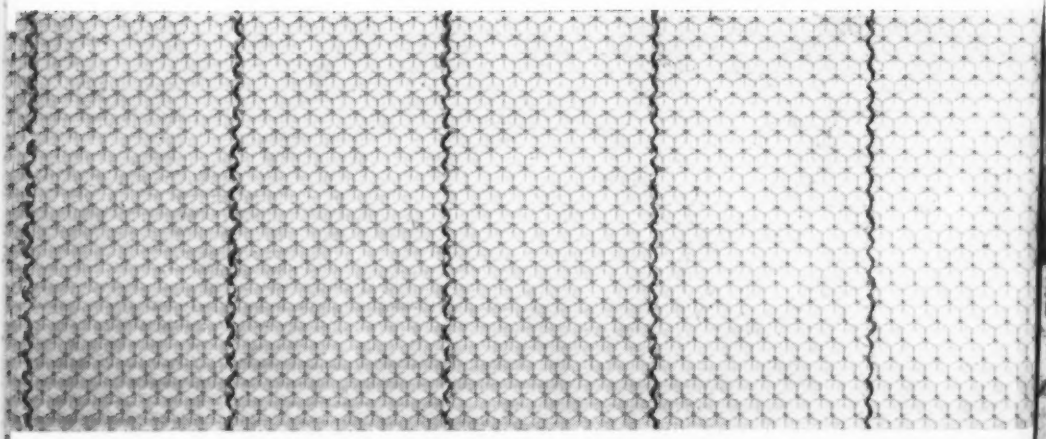

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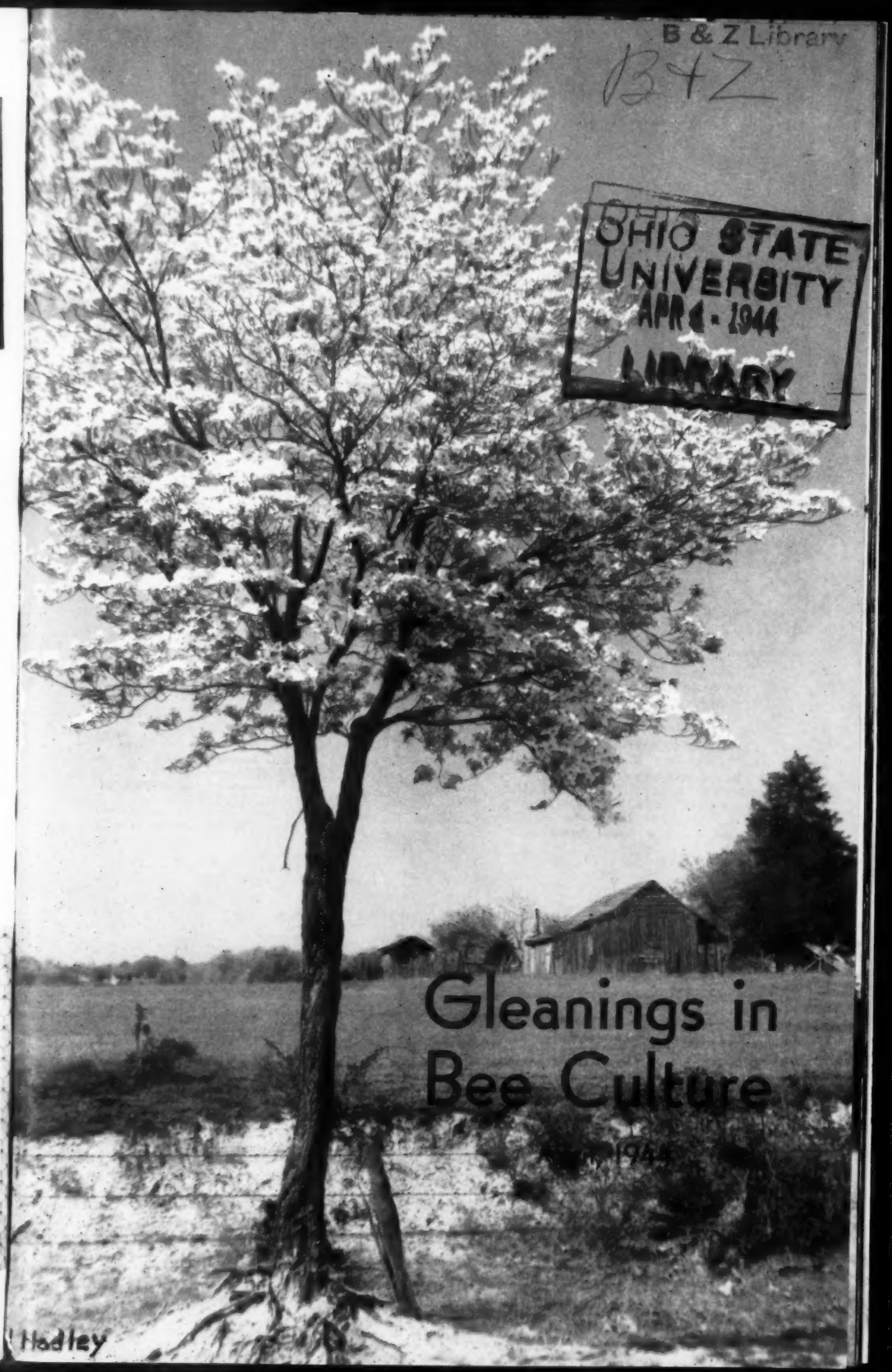

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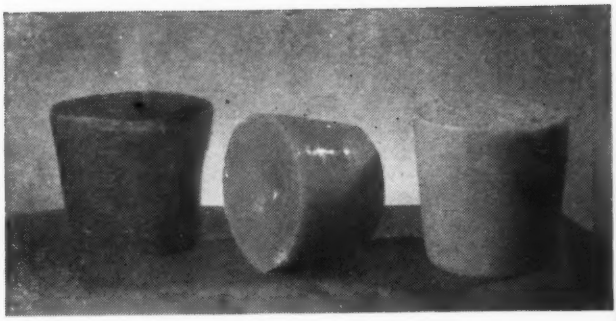

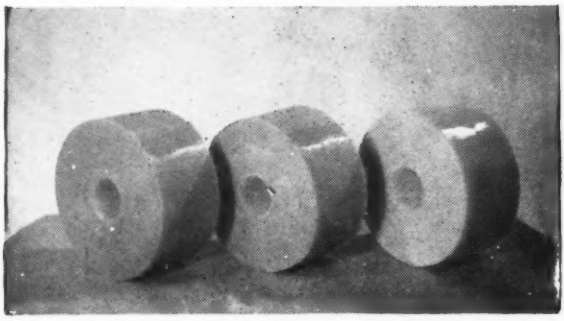

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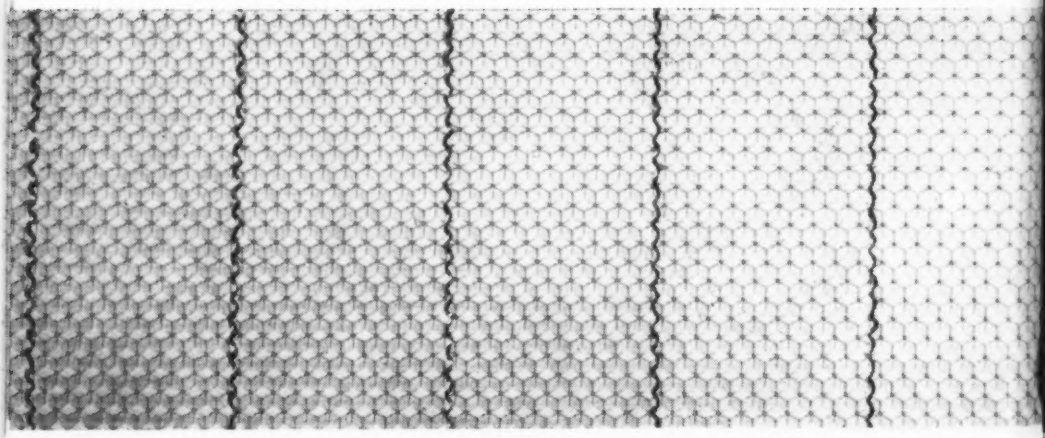

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May, 1944

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"You do a wonderful job rendering out beeswax from comb and refuse, especially now when wax is needed in the war and for foundation to produce more wax. Your machinery gets all the beeswax out of old combs, slumgum and beeswax refuse. The beekeeper, whether he is commercial or a small beekeeper, holding down another job, has little to gain by trying to do this work, and at best he does not get all his wax. You folks can sure put me on the list for my old combs and everything else that contains beeswax because I cannot remove it as efficiently as you can."—John V. Wilbanks, Florida.

Turn your beeswax into Dadant's Crimp-wired foundation which will give you sturdy everlasting combs that will help build large colonies every year to gather all the honey there is. It is a permanent investment. Ship your wax to us. It will be covered by insurance and stored without charge in our modern factory. Send for details.

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The hooks in Dadant's Crimp-wired Foundation support your combs firmly in the frame for years of hard use.

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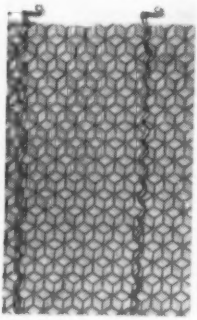
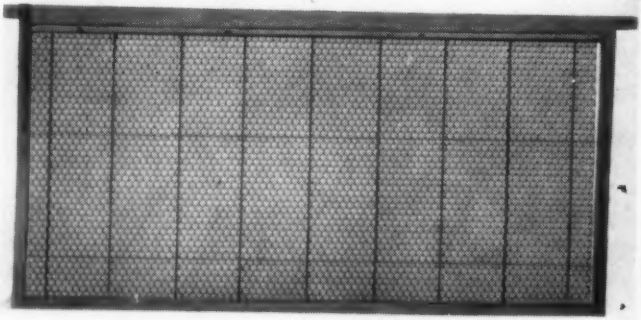
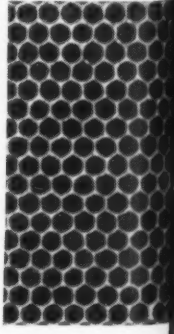
The drawn comb is straight from side to side, does not sag, nor stretch nor buckle, and will produce worker bees every year.







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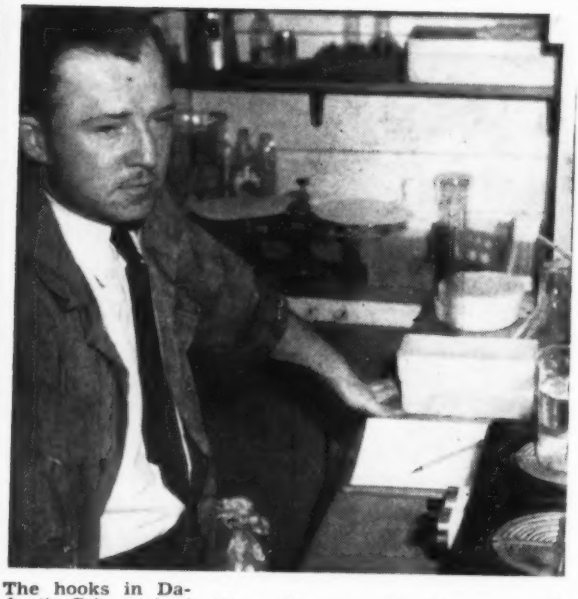

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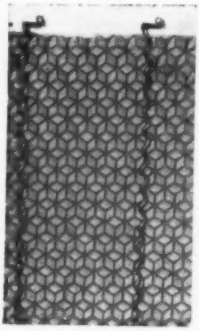

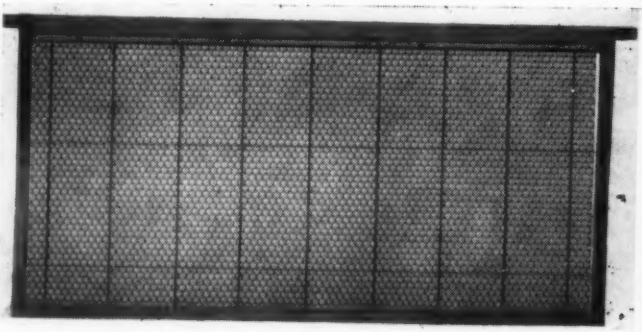

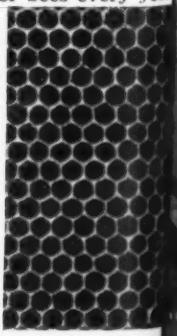

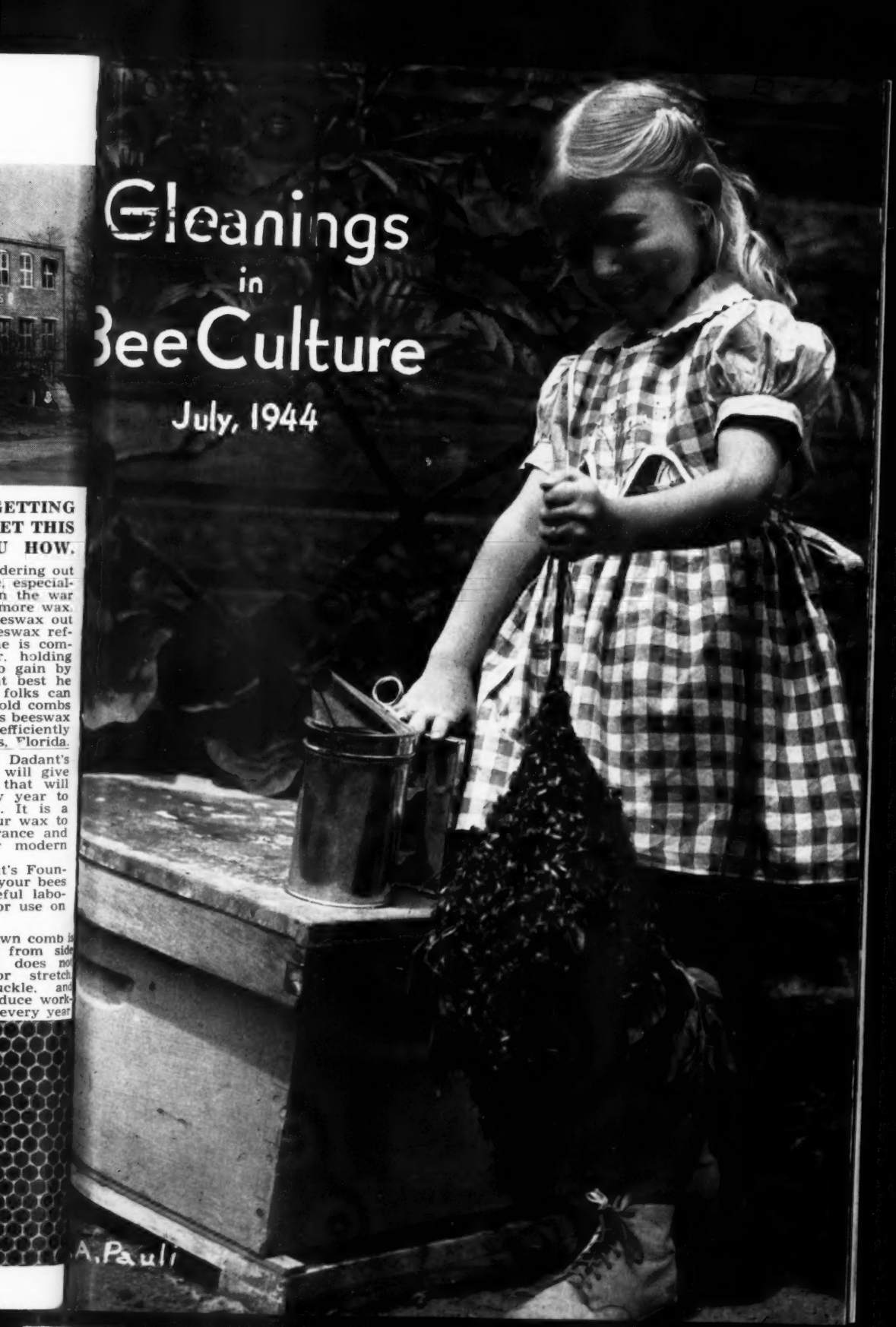
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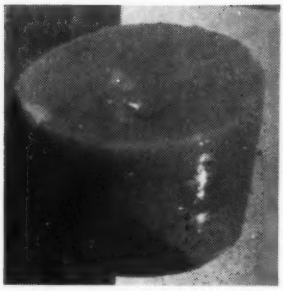

That Extra Cake of Wax

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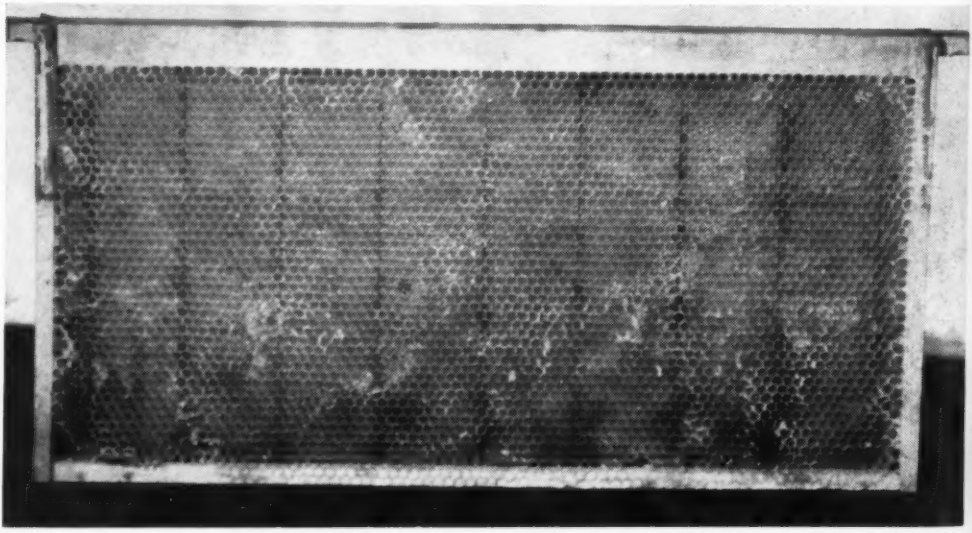

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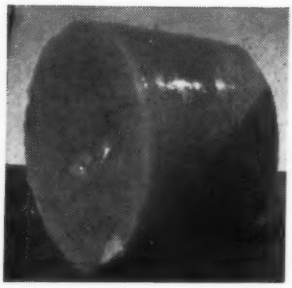

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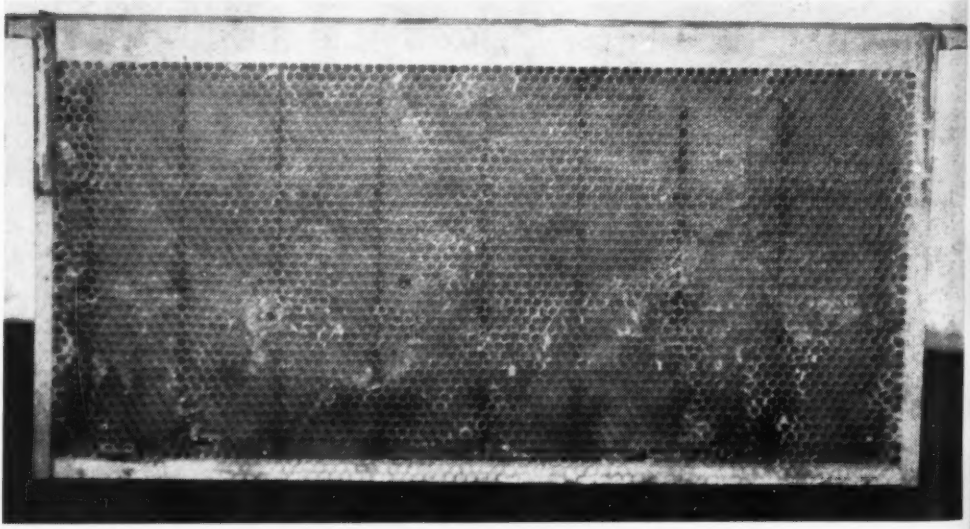

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Gleanings in Bee Culture

September, 1944

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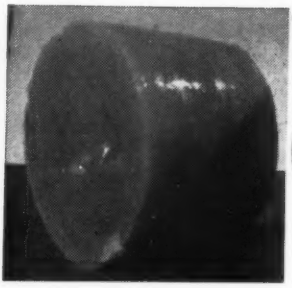

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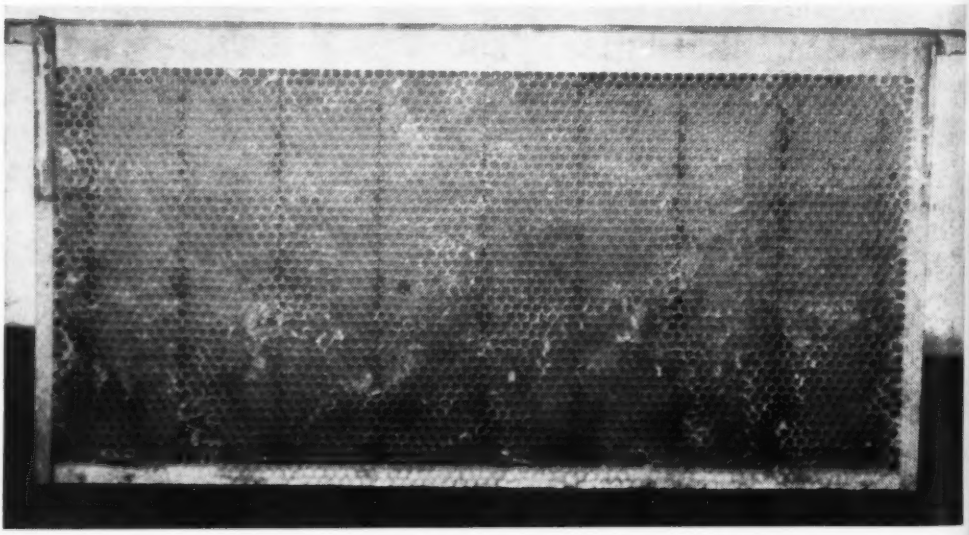

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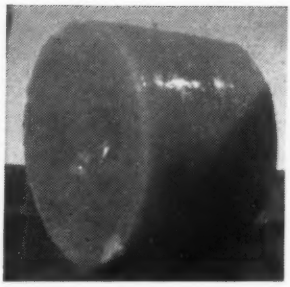
Gleanings in Bee Culture
October, 1944
Paul Hadley



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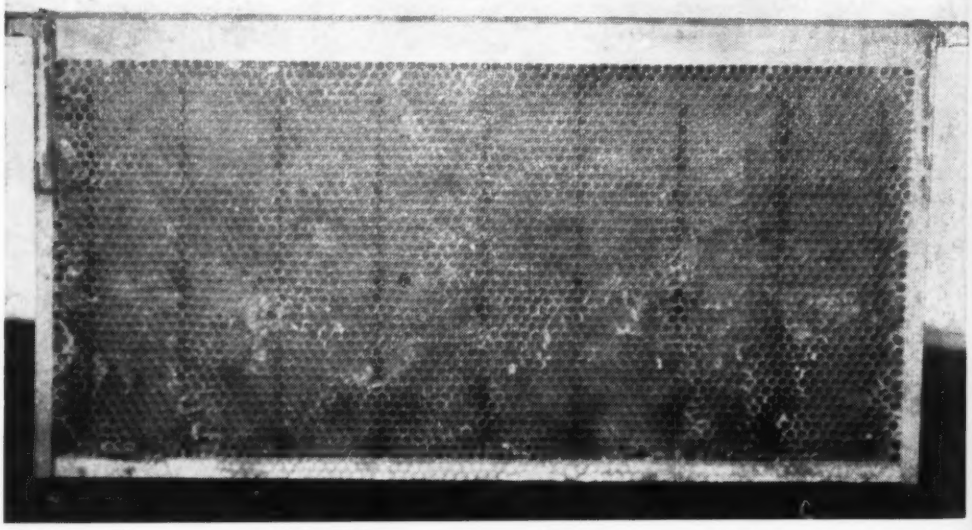

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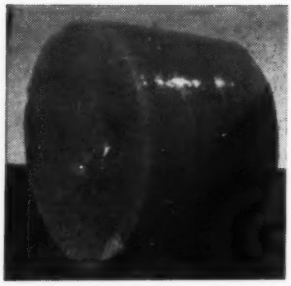
Gleanings in Bee Culture

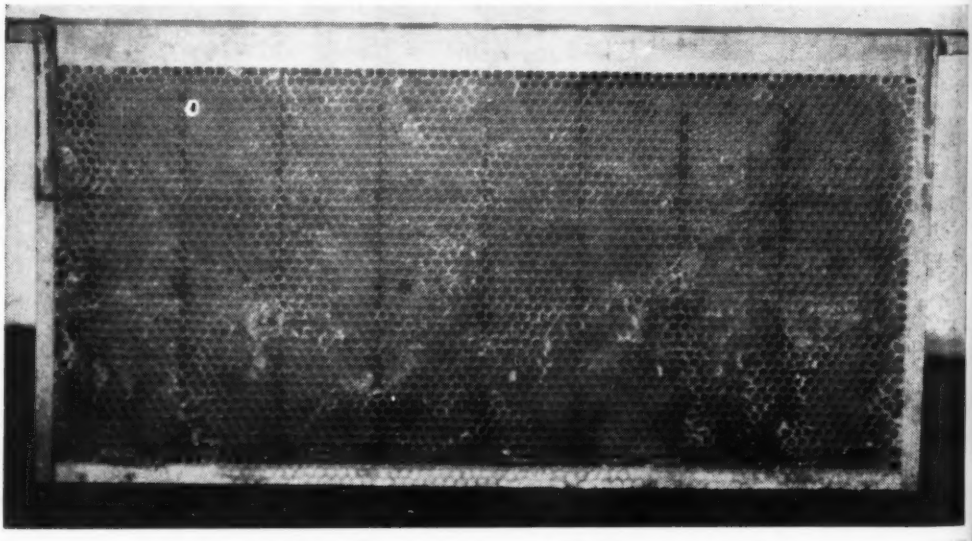
November, 1944



The wax you cannot get is just the wax we do get—to add extra pounds to your income. It is this extra wax that will make you feel like John Wilbanks in Florida: "Your machinery gets all the beeswax out of old combs, slum-gum, and beeswax refuse. The beekeeper, small or large, has little to gain by trying to do this work; at best, he does not get all his wax." Well said, Mr. Wilbanks, and this extra wax often more than pays the cost of transportation.

Turn your beeswax into Dadant's Crimp-wired Foundation, which will give you sturdy everlasting combs that will help build large colonies every year to gather all the honey there is. It is a permanent investment. Ship your wax to us. It will be covered by insurance and stored without charge in our modern factory. Send for details.

Remember, all the wax in Dadant's Foundation is pure beeswax, just as your bees make it, maintained so by careful laboratory examination. It is safe for use on any market.



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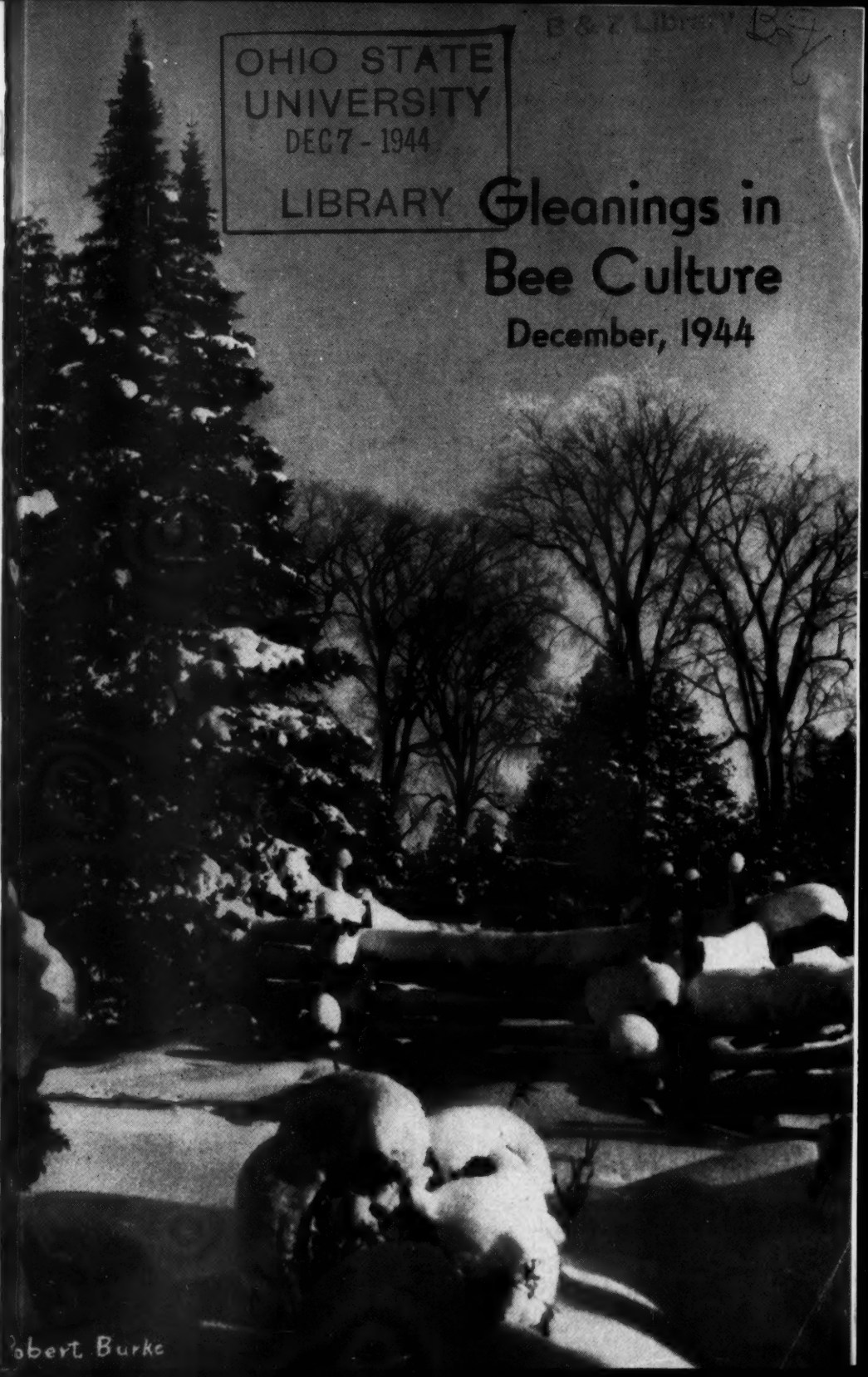
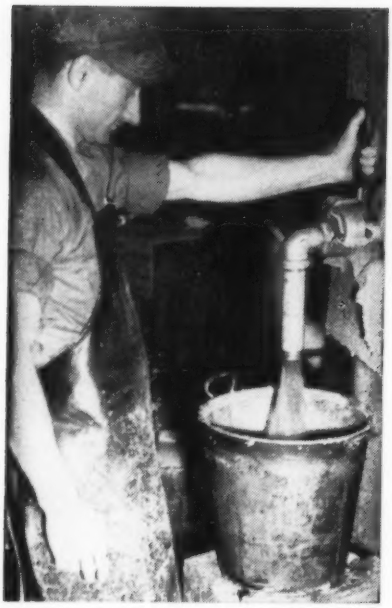
December, 1944



Robert Burke

XUM



That Extra Cak of Wax

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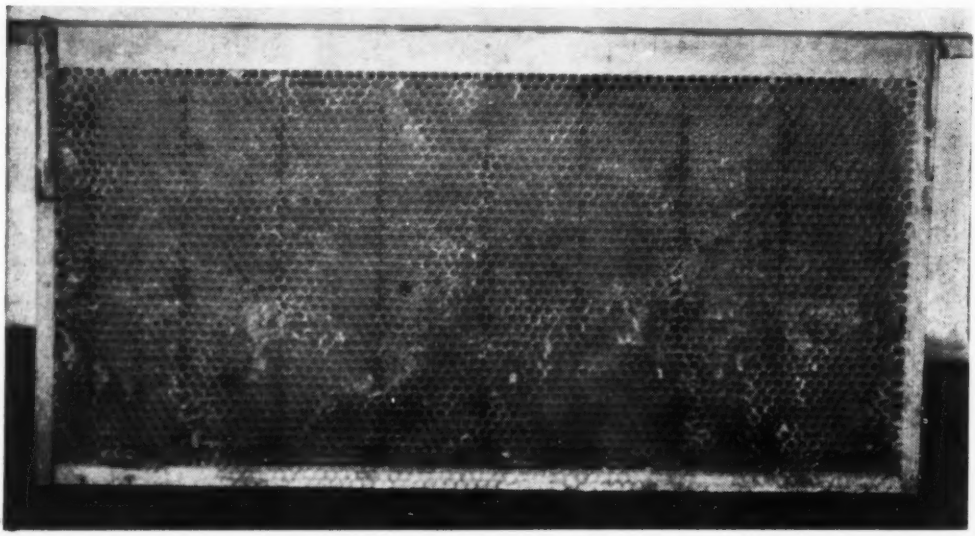

Dadant & Sons, Hamilton, Ill.

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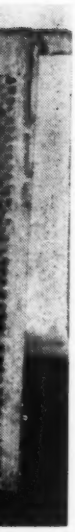

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